

Microscale Survey Screenshots

Page 1:

Welcome!

In this survey we will ask you to compare the different ways that we represent two physiological phenomena associated with the cellular and molecular environment: **signal transduction** and **constitutive activation** (a type of overactivation).

We will present you with two task-based scenarios, **(1) expert** and **(2) general** audience, and ask you to identify the **(1) most** and **(2) least** effective visual representations for each scenario's communication objective for both **signal transduction** and **constitutive activation**, respectively. We will furthermore ask you to provide some basic ratings and keywords for your choices. We will use these data to **analyze and develop a set of recommendations for more effective biomedical process representations** driven by audience and task. Following the conclusion of this study we plan to make these **results and visual assets available to the broader research community**.

In compliance with [REDACTED] regulations, we will **not** collect or store any personally identifying information unless you choose to provide it. We will keep private any personal information that you provide (*i.e., profession, age, gender, email*), and only use this to identify possible demographic-related patterns in perception, or for follow-up questions we may have. Your data will be stored on Typeform's secure servers with multi-factor authentication (for more information, click [here](#)) and, following the completion of this study, will be moved to a secure server at [REDACTED]

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Page 2:

1* First, please tell us about yourself.

What is your profession? If you prefer not to say, simply write N/A. *
e.g. Molecular biologist, 10 years

Type your answer here...

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Page 3:

2 ➔ Please provide your email address if you would be willing for us to contact you for further discussion about your responses. *If you prefer not to, simply write N/A.*

Type your answer here...

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Page 4:

3 ➔ What gender do you most identify with? *

- A Male
- B Female
- C Prefer not to say

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4 ➔ How old are you? *

A Less than 25 years old

B 25–34 years old

C 35–44 years old

D 45–54 years old

E 55–64 years old

F 65–74 years old

G 75 years or older

H Prefer not to say

1 ➔ How would you rate your expertise on molecular signal transduction, relative to the general population? *

0 1 2 3 4 5

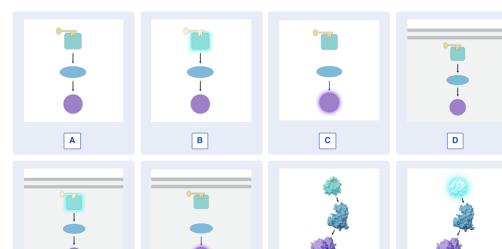
No knowledge Extremely knowledgeable

2→ Consider the following scenario and communication objective in describing signal transduction for an **expert audience**:

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.

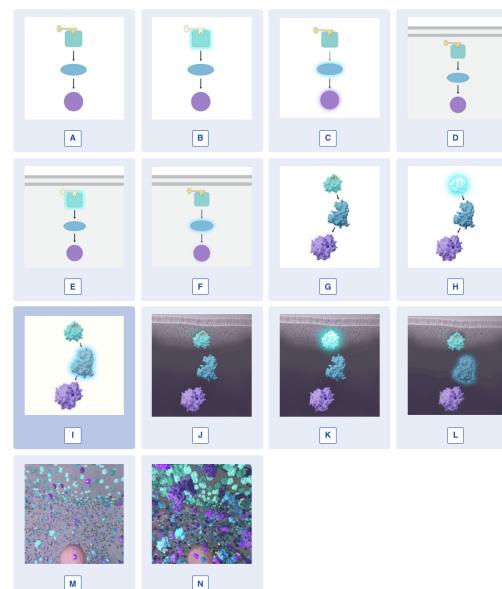
In your opinion, which of the following assets **BEST** visually describes and supports this scenario and communication objective? *

To zoom in on the visuals use Crtl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [REDACTED]
[REDACTED] GalleryST



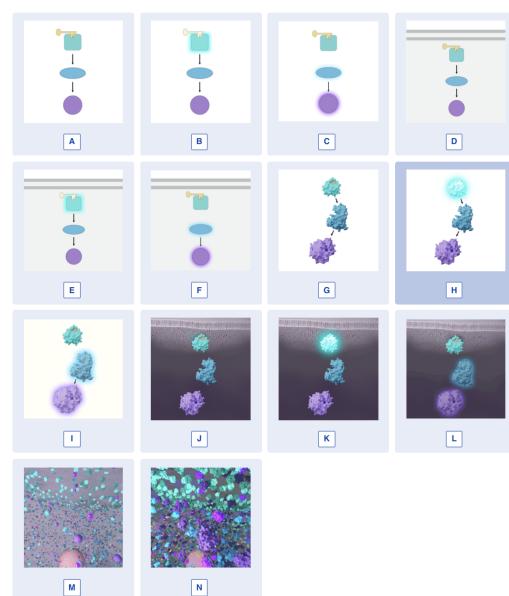
Powered by Typeform ▾

This module is designed to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.
3→ What is your **second choice** for this scenario and co...



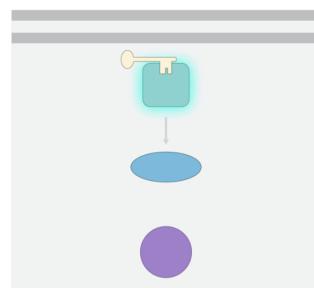
Powered by Typeform ▾

on the newly-discovered pivotal role that a ligand plays in a signalling pathway.
Th 4 → What is your **third choice** for this scenario and com...
location in the cell with a visual supplement to their publication.



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5 → Now we will ask you to provide a few ratings of only your **top** choice:



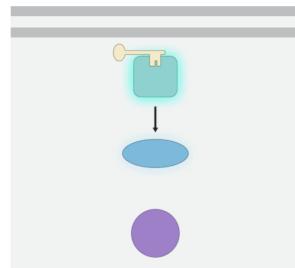
Continue press Enter ↵

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5 → Now we will ask you to provide a few ratings of only y...

- a. Rate your **top** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



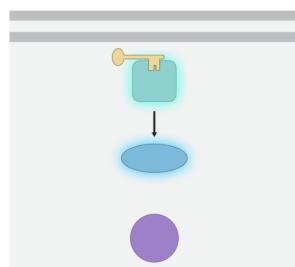
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

5 → Now we will ask you to provide a few ratings of only y...

- b. Rate your **top** choice for **visual clarity**. *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

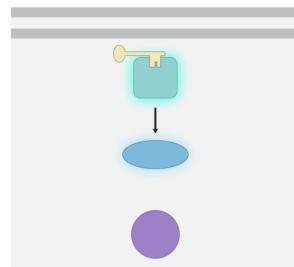
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Page 13:

5 → Now we will ask you to provide a few ratings of only y...

c. Rate your top choice for **scientific accuracy**. *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



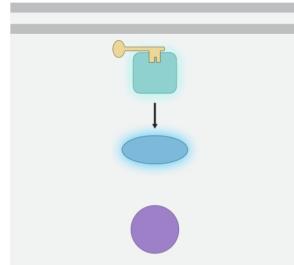
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

Page 14:

5 → Now we will ask you to provide a few ratings of only y...

d. Rate your top choice for **communication success** (i...
An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent
- F N/A - I lack the expertise to answer this question

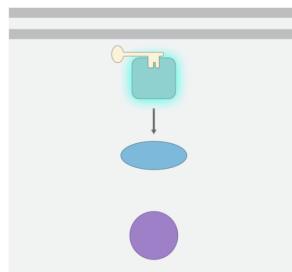
Powered by Typeform ^ | v

Page 15:

5 → Now we will ask you to provide a few ratings of only y...

- e. Use the below keywords to describe the **strengths** of your **top choice**. *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



Choose as many as you like

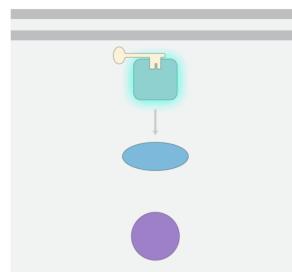
- A Accurate
- B Clear ✓
- C Detailed ✓
- D Easy to read

Powered by Typeform ^ | v

Page 16:

5 → Now we will ask you to provide a few ratings of only y...

f. Use the below keywords to describe the **weaknesses**...



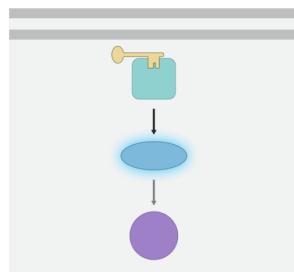
Choose as many as you like

- A Confusing
- B Distracting
- C Excessive
- D Inaccurate
- E Misleading ✓
- F Simplistic ✓
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

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5 → Now we will ask you to provide a few ratings of only y...

9. If you have further comments on the options or your **top** choices for this **expert scenario**, please write them here. Otherwise, simply write N. *



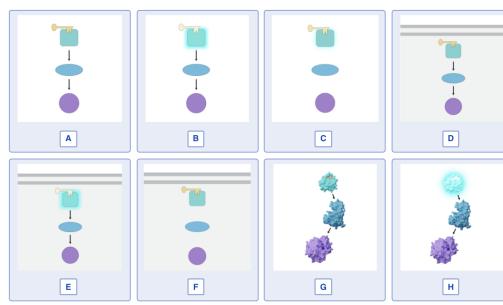
Type your answer here...

Shift ⌘ + Enter ↵ to make a line break

Powered by Typeform ^ | v

1. Consider again the same scenario and communication objective in describing signal transduction for an **expert audience**. In your opinion, which of the following assets **LEAST** visually describes and supports this scenario and communication objective (i.e., your **bottom choice**)? Please choose a visual only once. To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [\[GalleryST\]](#) *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



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on the newly-discovered pivotal role that a ligand plays in a signalling pathway.
The 2+ What is your **second least effective choice** for this ... and its
location in the cell with a visual supplement to their publication.



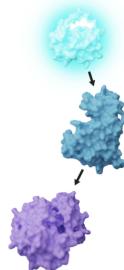
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on the newly-discovered pivotal role that a ligand plays in a signalling pathway.
The 3+ What is your **third least effective choice** for this sc... and its
location in the cell with a visual supplement to their publication.



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4 Now we will ask you to provide a few ratings of only your **bottom** choice:



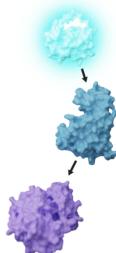
Continue press Enter ↵

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- a. Rate your **bottom** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



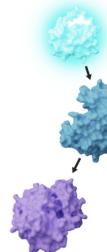
<input type="radio"/> A 1 - Poor
<input type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input checked="" type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

b. Rate your **bottom** choice for **visual clarity**. *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



A 1 - Poor

B 2 - Fair

C 3- Average

D 4 - Very good

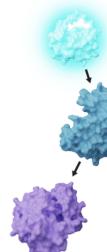
E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

c. Rate your **bottom** choice for **scientific accuracy**. *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.



A 1 - Poor

B 2 - Fair

C 3- Average

D 4 - Very good

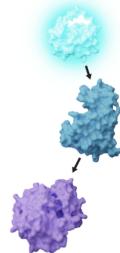
E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- d. Rate your **bottom** choice for **communication success** (i.e., How well does it meet the researcher's communication objective?). *

An immunology researcher is publishing in a prominent immunological venue on the newly-discovered pivotal role that a ligand plays in a signaling pathway. Their goal is to communicate the specificity of the activation pathway and its location in the cell with a visual supplement to their publication.

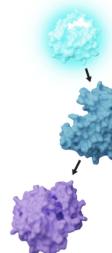


A 1 - Poor
 B 2 - Fair
 C 3- Average
 D 4 - Very good

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

e. Use the below keywords to describe the **strengths** o...



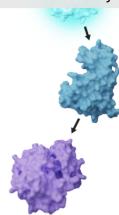
Choose as many as you like

A Accurate
 B Clear
 C Detailed
 D Easy to read
 E Informative
 F Precise
 G Pretty
 H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

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4 → Now we will ask you to provide a few ratings of only y...
f Use the below keywords to describe the **weaknesses**...



Choose as many as you like

- A Confusing ✓
- B Distracting
- C Excessive
- D Inaccurate ✓
- E Misleading
- F Simplistic
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

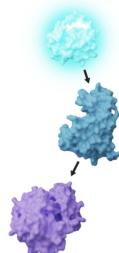
OK ✓

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4 → Now we will ask you to provide a few ratings of only y...

g. If you have further comments on the options or your **bottom** choices for this expert scenario, please write them here. Otherwise, simply write N. *



Type your answer here...

Shift + Enter ↵ to make a line break

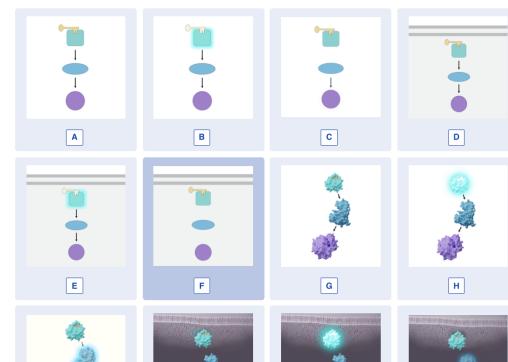
Powered by Typeform ^ | v

1+ Now consider the following scenario and communicate effectively in describing signal transduction for a **general audience**:

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.

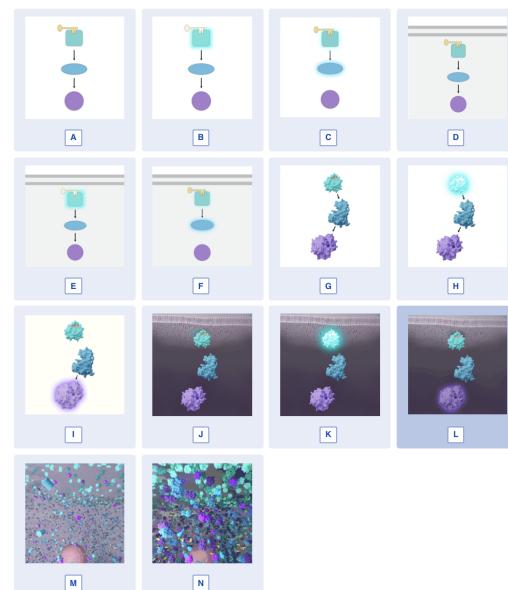
In your opinion, which of the following assets **BEST** visually describes and supports this scenario and communication objective? *

To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [REDACTED] (GalleryST)



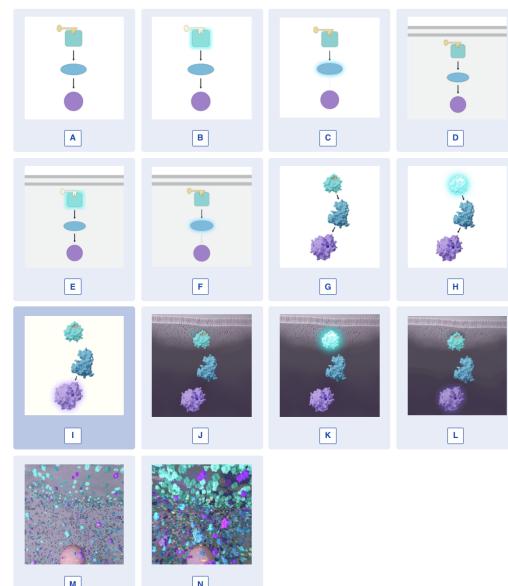
Powered by Typeform ▲ ▼

to understand how a 'message' is relayed through a series of messengers
ins 2+ What is your **second choice** for this scenario and co...



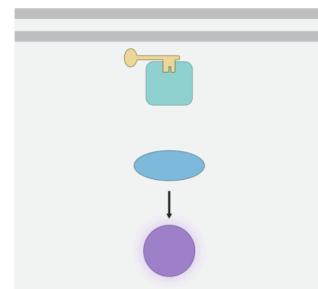
Powered by Typeform ▲ ▼

An 3 ➔ What is your **third choice** for this scenario and com...
to understand how a 'message' is relayed through a series of messengers
inside a cell.



Powered by Typeform ^ | v

4 ➔ Now we will ask you to provide a few ratings of only your **top** choice:



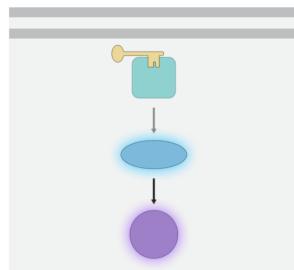
Continue press Enter ↵

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- a. Rate your **top** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



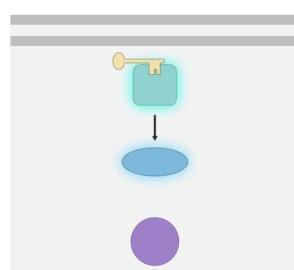
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- b. Rate your **top** choice for **visual clarity**. *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



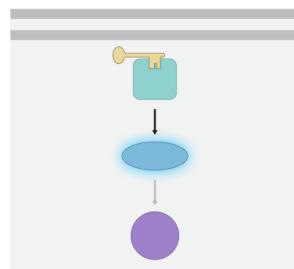
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

c. Rate your **top** choice for **scientific accuracy**. *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



A 1 - Poor

B 2 - Fair

C 3- Average

D 4 - Very good

E 5 - Excellent

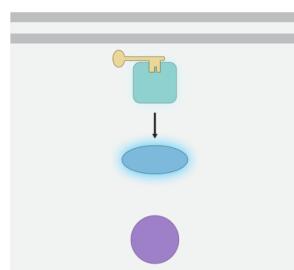
F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

d. Rate your **top** choice for **communication success** (i.e., How well does it meet the student's communication objective?). *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



A 1 - Poor

B 2 - Fair

C 3- Average

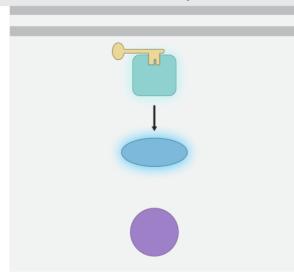
D 4 - Very good

E 5 - Excellent

Powered by Typeform ^ | v

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4 → Now we will ask you to provide a few ratings of only y...
e Use the below keywords to describe the **strengths** o...



Choose as many as you like

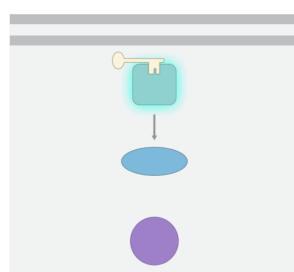
- A Accurate ✓
- B Clear ✓
- C Detailed
- D Easy to read ✓
- E Informative
- F Precise
- G Pretty
- H Other (please separate multiple keywords with a comma)

OK ✓

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4 → Now we will ask you to provide a few ratings of only y...
inside f Use the below keywords to describe the **weaknesse...**



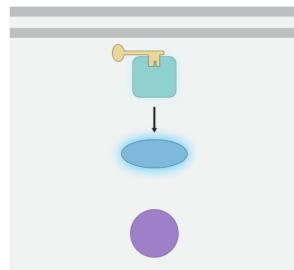
Choose as many as you like

- A Confusing
- B Distracting
- C Excessive
- D Inaccurate ✓
- E Misleading
- F Simplistic ✓
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

9. If you have further comments on the options or your **top** choices for this *general* scenario, please write them here. Otherwise, simply write N. *



Type your answer here...

Shift + Enter ↵ to make a line break

Powered by Typeform ^ | v

- 1 Consider again the same scenario and communication objective in describing signal transduction for a **general audience**. In your opinion, which of the following assets **LEAST** visually describes and supports this scenario and communication objective (i.e., your **bottom** choice)? Please choose a visual only once. To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [\[GalleryST\]](#)*

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



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to understand how a 'message' is relayed through a series of messengers
ins[4] 2 What is your **second least effective choice** for this ...



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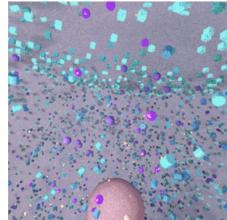
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An introductory biology student is studying for an upcoming exam. Their goal is to 3 What is your **third least effective choice** for this scenario ... inside a cell.



Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only your **bottom** choice:



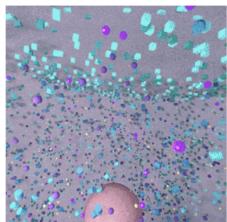
Continue press Enter ↵

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4 Now we will ask you to provide a few ratings of only y...

- a. Rate your **bottom** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



- A 1 - Poor
 B 2 - Fair
 C 3- Average
 D 4 - Very good
 E 5 - Excellent
 F N/A - I lack the expertise to answer this question

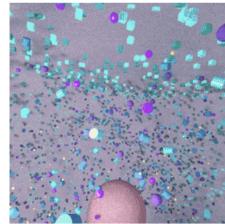
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4 Now we will ask you to provide a few ratings of only y...

b. Rate your **bottom** choice for **visual clarity**. *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



Key A	1 - Poor
<input type="checkbox"/>	2 - Fair
<input type="checkbox"/>	3- Average
<input type="checkbox"/>	4 - Very good
<input type="checkbox"/>	5 - Excellent
<input type="checkbox"/>	N/A - I lack the expertise to answer this question

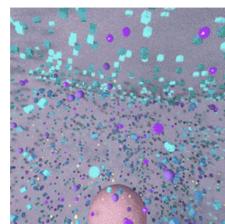
Powered by Typeform ^ | v

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4 Now we will ask you to provide a few ratings of only y...

c. Rate your **bottom** choice for **scientific accuracy**. *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



Key A	1 - Poor
<input type="checkbox"/>	2 - Fair
<input type="checkbox"/>	3- Average
<input type="checkbox"/>	4 - Very good
<input type="checkbox"/>	5 - Excellent
<input type="checkbox"/>	N/A - I lack the expertise to answer this question

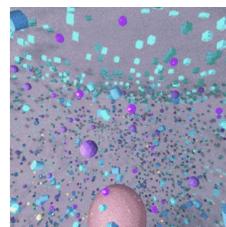
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Page 47:

4 Now we will ask you to provide a few ratings of only y...

- d. Rate your **bottom** choice for **communication success** (i.e., How well does it meet the student's communication objective?). *

An introductory biology student is studying for an upcoming exam. Their goal is to understand how a 'message' is relayed through a series of messengers inside a cell.



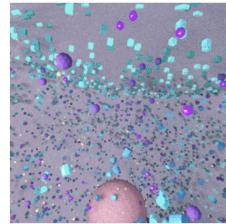
Key A 1 - Poor
 B 2 - Fair
 C 3- Average
 D 4 - Very good
 E 5 - Excellent
 F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

Page 48:

4 Now we will ask you to provide a few ratings of only y...

e Use the below keywords to describe the **strengths** o...



Choose as many as you like

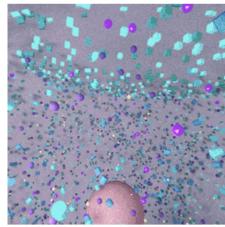
A Accurate
 B Clear
 C Detailed ✓
 D Easy to read
 E Informative
 F Precise
 G Pretty
 H Other (please separate multiple keywords with a comma)

OK ✓

Powered by Typeform ^ | v

Page 49:

4 Now we will ask you to provide a few ratings of only y...
f Use the below keywords to describe the **weaknesses**...
to understand how a message is relayed through a series of messengers inside a cell.



Choose as many as you like

- A Confusing ✓
- B Distracting ✓
- C Excessive ✓
- D Inaccurate
- E Misleading
- F Simplistic

Key Q Visually unappealing

H Other (please separate multiple keywords with a comma)

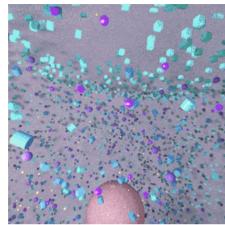
OK ✓

Powered by Typeform ^ | v

Page 50:

4 Now we will ask you to provide a few ratings of only y...

- g. If you have further comments on the options or your **bottom** choices for this *general* scenario, please write them here.
Otherwise, simply write N. *



Type your answer here...

Shift + Enter ↵ to make a line break

Powered by Typeform ^ | v

1↳ How would you rate your expertise on molecular constitutive activation, relative to the general population? *



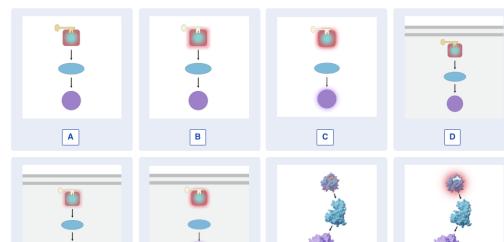
2↳ Consider the following scenario and communication objective in describing constitutive activation for an **expert audience**:

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.

In your opinion, which of the following assets **BEST** visually describes and supports this scenario and communication objective? *

To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [REDACTED]

[REDACTED] /GalleryCA

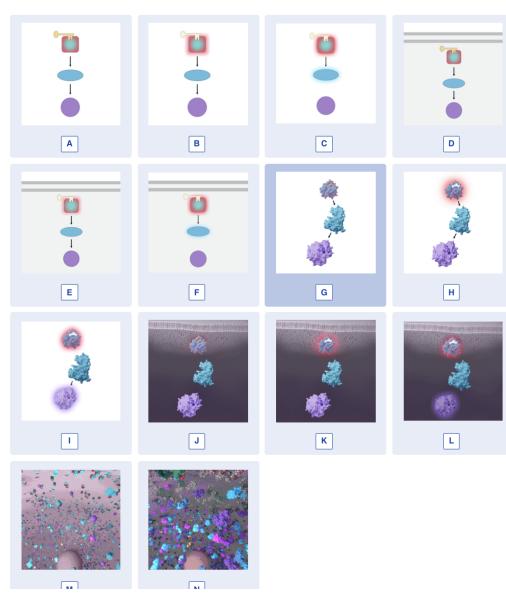


the readership of a prominent immunology journal the mechanism of disease in which produces an unregulated positive feedback loop.



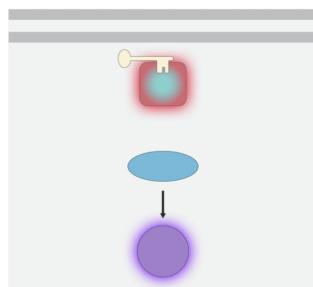
Powered by Typeform ^ | v

An oncology researcher would like a visual supplement that demonstrates to the 4+ What is your third choice for this scenario and com...se in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



Powered by Typeform ^ | v

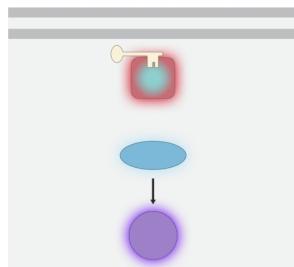
5 → Now we will ask you to provide a few ratings of only your **top** choice:



Continue press Enter ↵

Powered by Typeform ^ | v

5 → Now we will ask you to provide a few ratings of only y...
the n a Rate your **top** choice for **aesthetics** (i.e., How visually... please in
which a key molecule in the signal transduction chain is constitutively activated,
which produces an unregulated positive feedback loop.



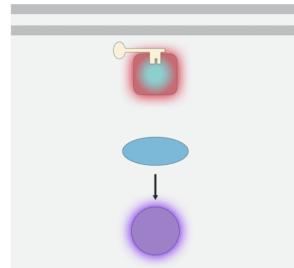
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent
- F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

5 → Now we will ask you to provide a few ratings of only y...

b. Rate your **top** choice for **visual clarity**. *

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



[A] 1 - Poor

[B] 2 - Fair

[C] 3- Average

[D] 4 - Very good

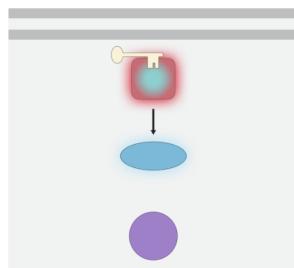
[E] 5 - Excellent

Powered by Typeform ^ | v

5 → Now we will ask you to provide a few ratings of only y...

d. Rate your **top** choice for **communication success** (i.e., How well does it meet the researcher's communication objective?). *

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



[A] 1 - Poor

[B] 2 - Fair

[C] 3- Average

[D] 4 - Very good

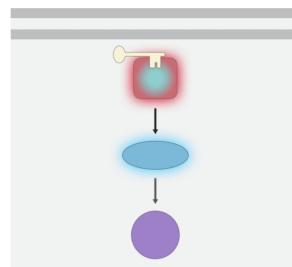
Powered by Typeform ^ | v

Page 59:

5 → Now we will ask you to provide a few ratings of only y...

c. Rate your **top** choice for **scientific accuracy**. *

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



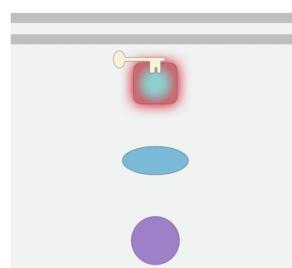
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

Page 60:

5 → Now we will ask you to provide a few ratings of only y...

WHICH **e** Use the below keywords to describe the **strengths** o...



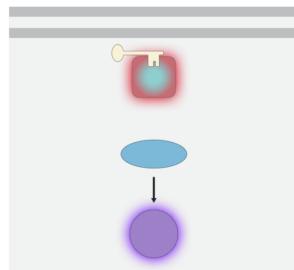
Choose as many as you like

- A Accurate
- B Clear
- C Detailed
- D Easy to read
- E Informative
- F Precise
- G Pretty
- H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

Page 61:

5 → Now we will ask you to provide a few ratings of only y...
which f Use the below keywords to describe the **weaknesse...**



Choose as many as you like

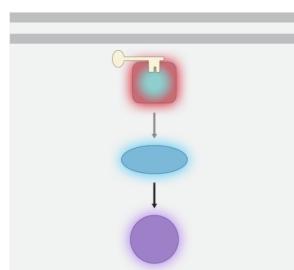
- A Confusing
- B Distracting
- C Excessive
- D Inaccurate
- E Misleading
- F Simplistic
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

Page 62:

5 → Now we will ask you to provide a few ratings of only y...

g. If you have further comments on the options or your **top** choices for this expert scenario, please write them here. Otherwise, simply write N. *



Type your answer here...

Shift ⌘ + Enter ↵ to make a line break

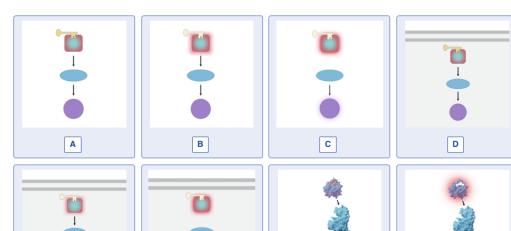
Powered by Typeform ^ | v

1→ Consider again the same following scenario and communication objective in describing constitutive activation for an **expert audience**:

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.

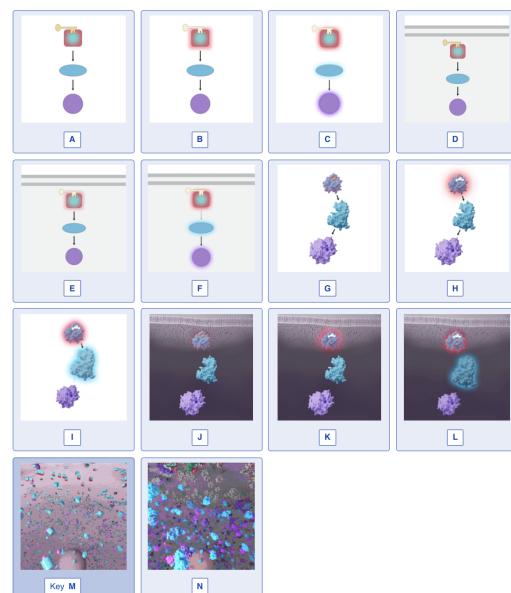
In your opinion, which of the following assets **LEAST** visually describes and supports this scenario and communication objective? *

To zoom in on the visuals use Crtl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [\[REDACTED\]](#) [\[REDACTED\] GalleryCA](#)



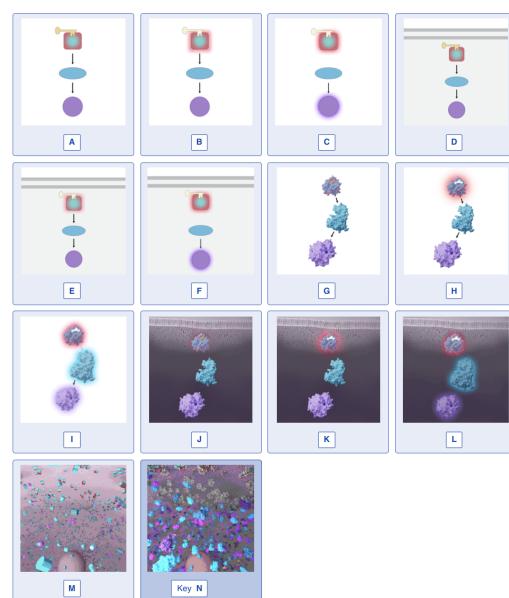
Powered by Typeform ^ | v

the readership of a prominent immunology journal the mechanism of disease in which 2→ What is your **second least effective choice** for this ... activated, which produces an unregulated positive feedback loop.



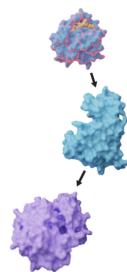
Powered by Typeform ^ | v

which a key molecule in the signal transduction chain is constitutively activated.
wh. 3 → What is your **third least effective choice** for this sc...



Powered by Typeform ^ | v

4+ Now we will ask you to provide a few ratings of only your **bottom** choice:



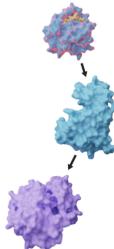
Continue press Enter ↵

Powered by Typeform ^ | v

4 → Now we will ask you to provide a few ratings of only y...

- a. Rate your **bottom** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



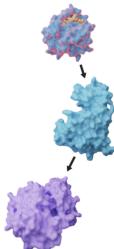
<input type="radio"/> A 1 - Poor
<input type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent

Powered by Typeform ^ | v

4 → Now we will ask you to provide a few ratings of only y...

- b. Rate your **bottom** choice for **visual clarity**.

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



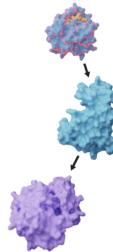
<input type="radio"/> A 1 - Poor
<input type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent
<input type="radio"/> F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

c. Rate your **bottom** choice for **scientific accuracy**. *

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.



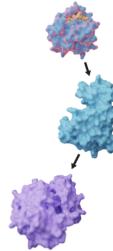
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

d. Rate your **bottom** choice for **communication success**.

An oncology researcher would like a visual supplement that demonstrates to the readership of a prominent immunology journal the mechanism of disease in which a key molecule in the signal transduction chain is constitutively activated, which produces an unregulated positive feedback loop.

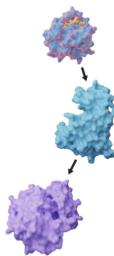


- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent
- F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

Page 71:

4 → Now we will ask you to provide a few ratings of only y...
e Use the below keywords to describe the **strengths** o...



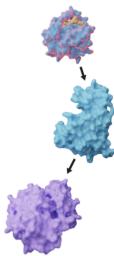
Choose as many as you like

- A Accurate
- B Clear
- C Detailed
- D Easy to read
- E Informative
- F Precise
- G Pretty
- H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

Page 72:

4 → Now we will ask you to provide a few ratings of only y...
f Use the below keywords to describe the **weaknesses** o...



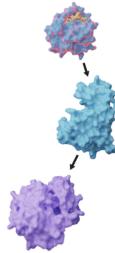
Choose as many as you like

- A Confusing
- B Distracting
- C Excessive
- D Inaccurate
- E Misleading
- F Simplistic
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

9. If you have further comments on the options or your **bottom** choices for this *expert* scenario, please write them here. Otherwise, simply write N.*



Type your answer here...

Shift ⌘ + Enter ↵ to make a line break

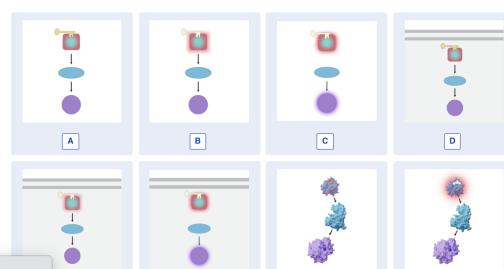
Powered by Typeform ^ | v

- 1 Now consider the following scenario and communication objective in describing constitutive activation for a **general audience**:

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.

In your opinion, which of the following assets **BEST** visually describes and supports this scenario and communication objective? *

To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [REDACTED]
[REDACTED] GalleryCA



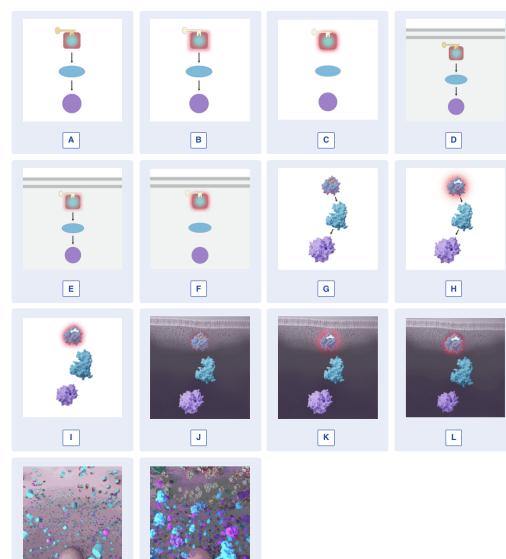
Powered by Typeform ^ | v

Waiting for visualization-uib.typeform.com...

Command + OR visit our supplementary website:

<http://2> What is your **second choice** for this scenario and co...

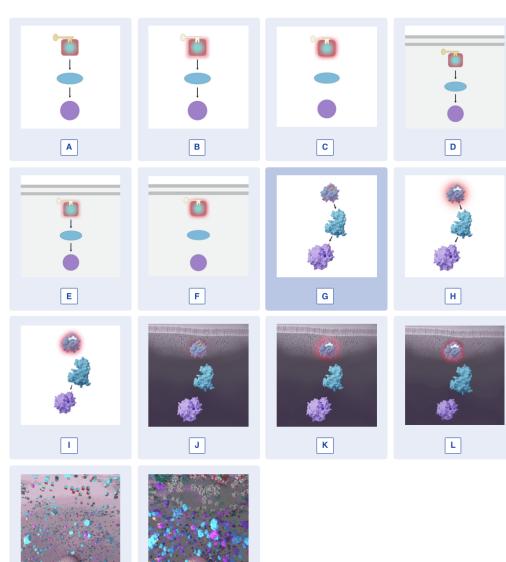
The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



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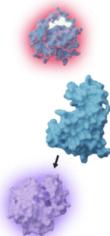
<http://3> What is your **third choice** for this scenario and com...

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



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4 Now we will ask you to provide a few ratings of only your **top** choice:



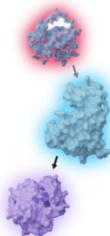
Continue press Enter ↵

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- a. Rate your **top** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



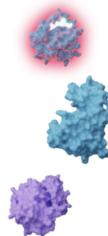
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent
- F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

b. Rate your top choice for **visual clarity**. *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



A 1 - Poor

B 2 - Fair

C 3- Average

D 4 - Very good

E 5 - Excellent

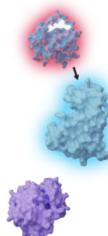
F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

c. Rate your top choice for **scientific accuracy**. *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



A 1 - Poor

B 2 - Fair

C 3- Average

D 4 - Very good

E 5 - Excellent

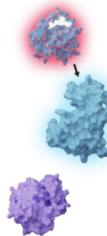
F N/A - I lack the expertise to answer this question

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- d. Rate your **top** choice for **communication success** (i.e., How well does it meet the student's communication objective?). *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



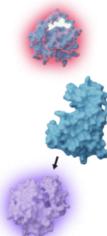
- A 1 - Poor
- B 2 - Fair
- C 3- Average
- D 4 - Very good
- E 5 - Excellent

Powered by Typeform ^ | v

4 Now we will ask you to provide a few ratings of only y...

- e. Use the below keywords to describe the **strengths** of your **top** choice. *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



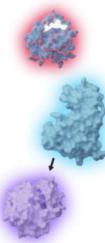
Choose as many as you like

- A Accurate
- B Clear
- C Detailed
- D Easy to read
- E Informative

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Page 83:

4 → Now we will ask you to provide a few ratings of only y...
This  Use the below keywords to describe the **weaknesses**...



Choose as many as you like.

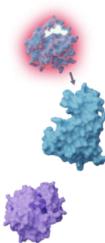
- A Confusing
- B Distracting
- C Excessive
- D Inaccurate
- E Misleading
- F Simplistic
- G Visually unappealing
- H Other (please separate multiple keywords with a comma)

Powered by Typeform 

Page 84:

4 → Now we will ask you to provide a few ratings of only y...

9. If you have further comments on the options or your **top** choices for this *general* scenario, please write them here. Otherwise, simply write N. *



Type your answer here...

Shift ⌘ + Enter ↵ to make a line break

Powered by Typeform 

Command + OR visit our supplementary website:

<http://> Consider again the same scenario and communicatio...

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



Powered by Typeform ^ | v

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be.

[2](#) What is your **second least effective choice** for this ... be.

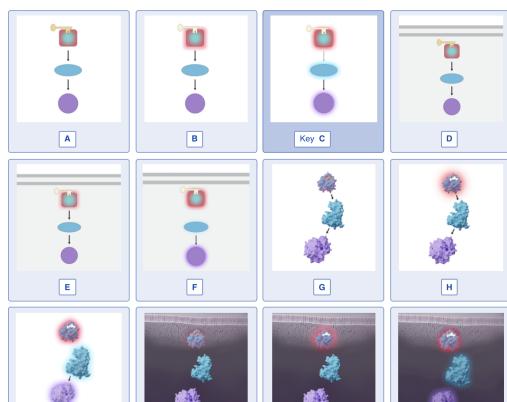
This causes the entire signaling pathway to be always switched 'on'.



Powered by Typeform ^ | v

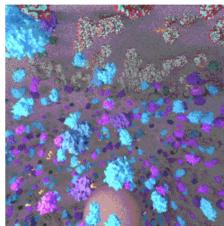
3 ➔ What is your **third least effective choice** for this scenario and communication objective? Please choose a visual only once. To zoom in on the visuals use Ctrl + on Windows Chrome, on Mac Chrome use Command + OR visit our supplementary website: [GalleryCA *](#)

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



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4 ➔ Now we will ask you to provide a few ratings of only your **bottom** choice:



Continue press Enter ↵

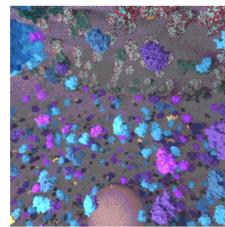
Powered by Typeform ^ | v

Page 89:

4 → Now we will ask you to provide a few ratings of only y...

- a. Rate your **bottom** choice for **aesthetics** (i.e., How visually appealing do you consider this to be?). *

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



<input type="radio"/> A 1 - Poor
<input type="radio"/> B 2 - Fair
<input checked="" type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent
<input type="radio"/> F N/A - I lack the expertise to answer this question

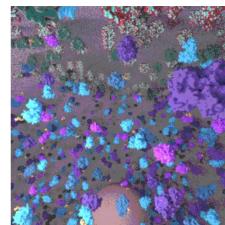
Powered by Typeform ^ | v

Page 90:

4 → Now we will ask you to provide a few ratings of only y...

- b. Rate your **bottom** choice for **visual clarity**. *

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



<input checked="" type="radio"/> A 1 - Poor
<input type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent
<input type="radio"/> F N/A - I lack the expertise to answer this question

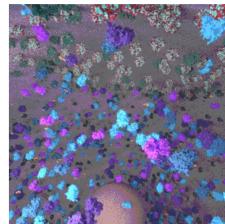
Powered by Typeform ^ | v

Page 91:

4 Now we will ask you to provide a few ratings of only y...

c. Rate your **bottom** choice for **scientific accuracy**. *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



<input type="radio"/> A 1 - Poor
<input checked="" type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent
<input type="radio"/> F N/A - I lack the expertise to answer this question

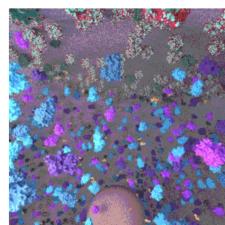
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4 Now we will ask you to provide a few ratings of only y...

d. Rate your **bottom** choice for **communication success** (i.e., How well does it meet the student's communication objective?). *

The same introductory biology student is tasked with identifying where in the signaling pathway a molecule is constantly activated when it should not be. This causes the entire signaling pathway to be always switched 'on'.



<input type="radio"/> A 1 - Poor
<input checked="" type="radio"/> B 2 - Fair
<input type="radio"/> C 3- Average
<input type="radio"/> D 4 - Very good
<input type="radio"/> E 5 - Excellent
<input type="radio"/> F N/A - I lack the expertise to answer this question

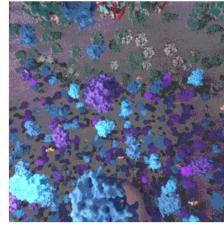
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4 Now we will ask you to provide a few ratings of only y...

e Use the below keywords to describe the **strengths** o...

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



Choose as many as you like

- A Accurate
- B Clear
- C Detailed
- D Easy to read
- E Informative
- F Precise
- G Pretty
- H Other (please separate multiple keywords with a comma)

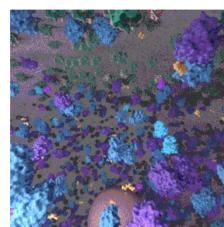
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4 Now we will ask you to provide a few ratings of only y...

f. Use the below keywords to describe the **weaknesses** of your **bottom** choice. *

The same introductory biology student is tasked with identifying where in the signalling pathway a molecule is constantly activated when it should not be. This causes the entire signalling pathway to be always switched 'on'.



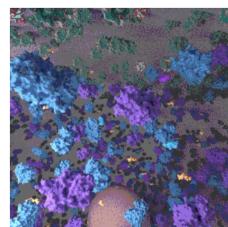
Choose as many as you like

- A Confusing
- B Distracting
- C Excessive
- D Inaccurate
- E Misleading
- F Simplistic

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4 Now we will ask you to provide a few ratings of only y...

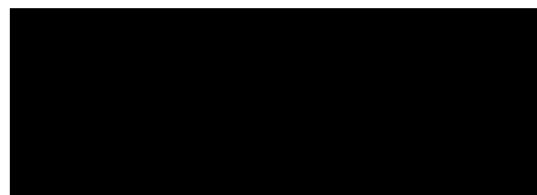
- g. If you have further comments on the options or your **bottom** choices for this general scenario, please write them here. Otherwise, simply write N. *



Type your answer here...

Shift ⌘ + Enter ↵ to make a line break

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Thank you for your participation!

If you have questions or are interested in updates on this work
please feel free to reach out to: [REDACTED]