

Design Cohort 3

Team 9: xAPI Gnome





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Matthew Kliewer



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Alison Hass



Brenda Bannan



Rob Houck



Pankaj Agrawal



Monique Head



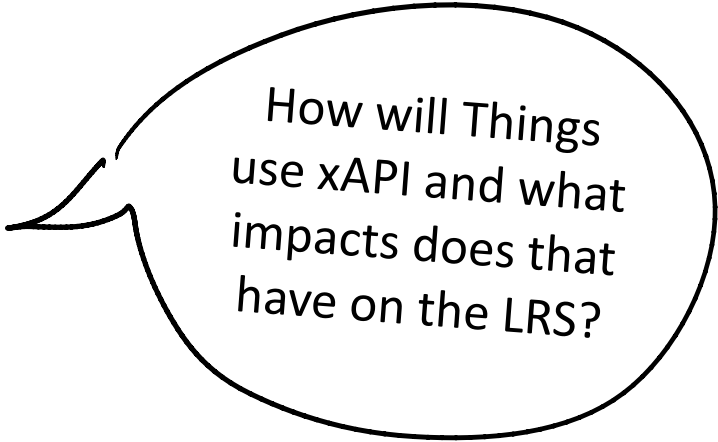
Megan Torrance

BOUNTY: Internet Of Things

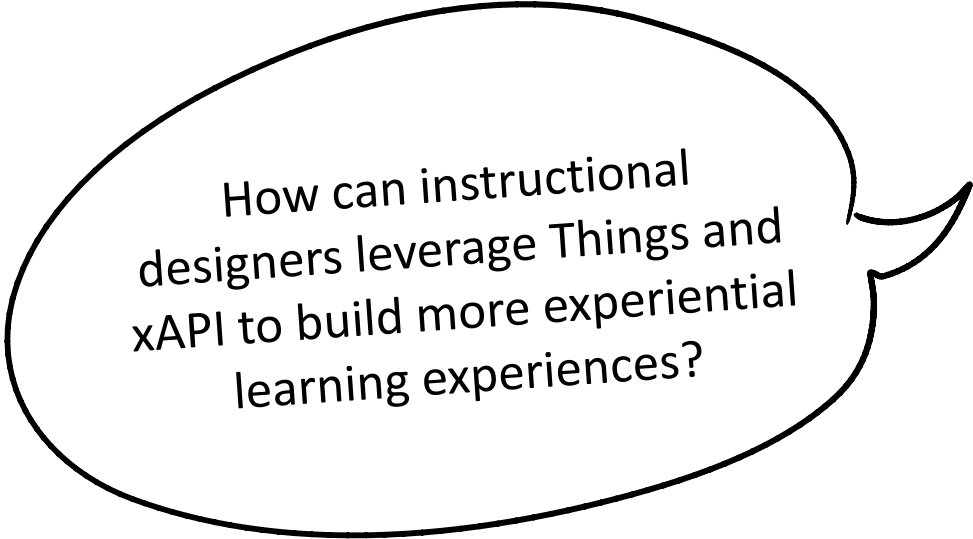
“IoT is a concept that describes a future where **devices, systems and services around the world are interconnected** across a common network (typically the Internet) and are able to interact in ways that fundamentally enhance the way we live our lives.”

US Ignite Global Cities Challenge (2014)
<https://us-ignite.org/globalcityteams/faq/>

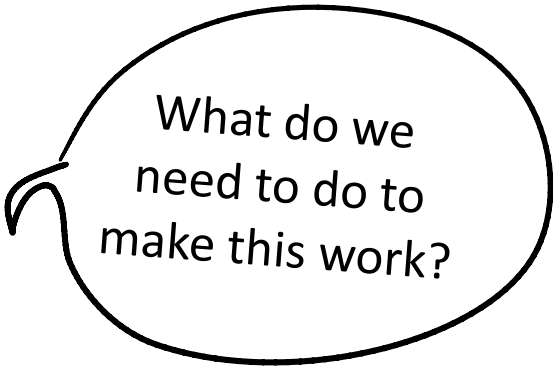




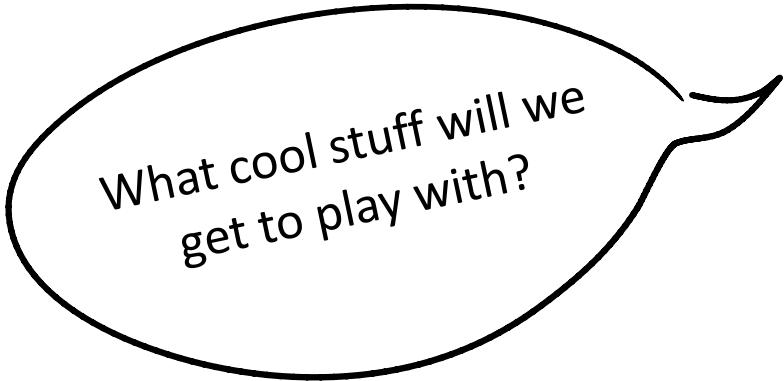
How will Things use xAPI and what impacts does that have on the LRS?



How can instructional designers leverage Things and xAPI to build more experiential learning experiences?



What do we need to do to make this work?



What cool stuff will we get to play with?



Saving energy is a beautiful thing.
Meet the Nest Learning Thermostat >

Train smarter. Go farther.

A black Surge GPS watch with a black strap. The screen displays '4.06 mi', '35:19.7', and '135 bpm'. The background is a blurred outdoor scene with a path and trees.

surge

THE #1 SELLING GPS WATCH IN THE US*

A collection of Withings health products: a white smart scale with a green display, a white smart water bottle with a green display, and a smartphone showing a green line graph. The Withings logo and 'Inspire health' tagline are visible.

Withings
Inspire health



GIMBAL
BEACON



WHIZTAGS NFC TAG



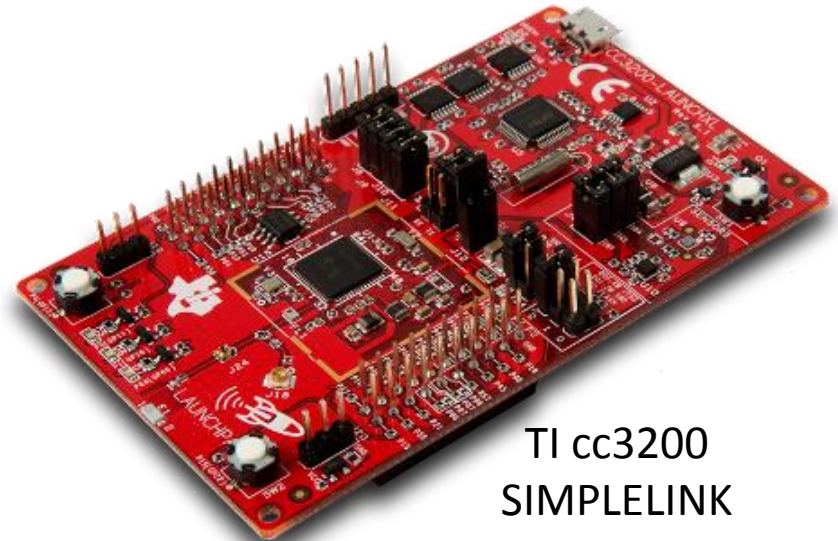
WEMO
INSIGHT



PUNCHTHROUGH
LIGHT BLUE BEAN



TI SENSORTAG



TI cc3200
SIMPLELINK

About that Internet Of Things...

“Connectivity and devices are just enablers. The **real value for users is created by making sense of the data** that those devices generate. Sensors generate data, data produces knowledge, knowledge drives action.”

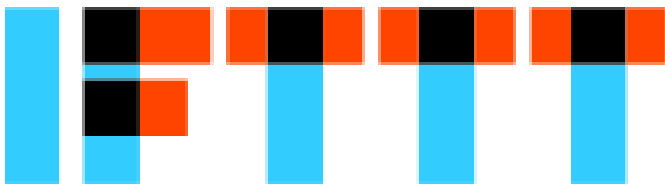
Schuermans & Vakulenko (2014)
*IoT: Breaking Free From Internet and Things -
How Communities and Data will Shape the
Future of IoT in Ways We Can't Imagine*



















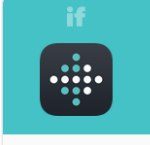

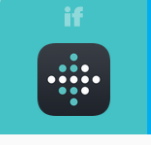
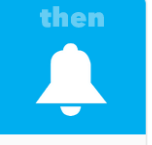
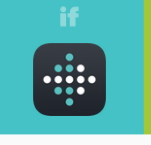
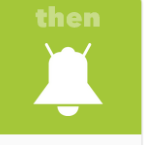


TRACK



ALL THE THINGS!



 	 	 
Weekly digest from Epicurious by troyholden 649 21	Schedule daily or weekly recurring Trello cards by trello 1.4k 142	Post a quick Facebook status update by anthony 2.3k 67
 	 	 
Read a digest of the week's popular Business Day articles by nytimes 8.8k 242	Build a Twitter List from a specific #hashtag by thisaccount 14k 901	Receive an email if there will be rain in your area tomorrow by solomakhin 63k 2.0k
 	 	 
Add your Fitbit daily activity summaries to a Google spreadsheet by fitbit 12k 948	Tweet when you achieve your daily step goal by fitbit 1.2k 128	Track your Fitbit sleep logs in a Google spreadsheet by fitbit 9.4k 482
 	 	 
Get your Fitbit activity summaries as a weekly digest on Sunday morning by fitbit 2.4k 58	Receive an iOS notification if you don't meet your daily Fitbit goals by fitbit 3.1k 207	Haven't achieved your daily goal? Get an Android notification by fitbit 1.6k 144

These Things
don't fit neatly in
a SCORM box.



Company A

Elearning: Welcome

Elearning: Log into LMS

Elearning: Plant tour

Class: Your benefits & you

Class: Email and You

Elearning: Who's who

Elearning: Our customers

Class: Finance 101

Class: Using the intranet

Recorded webinar

Webinar

Multiple choice test

Company B

Tour a place

Explore benefit package

Meet actual people

Attend webinar

Attend a class

Rate your experience

Complete online course

Observe something

Participate in an activity

Receive coaching

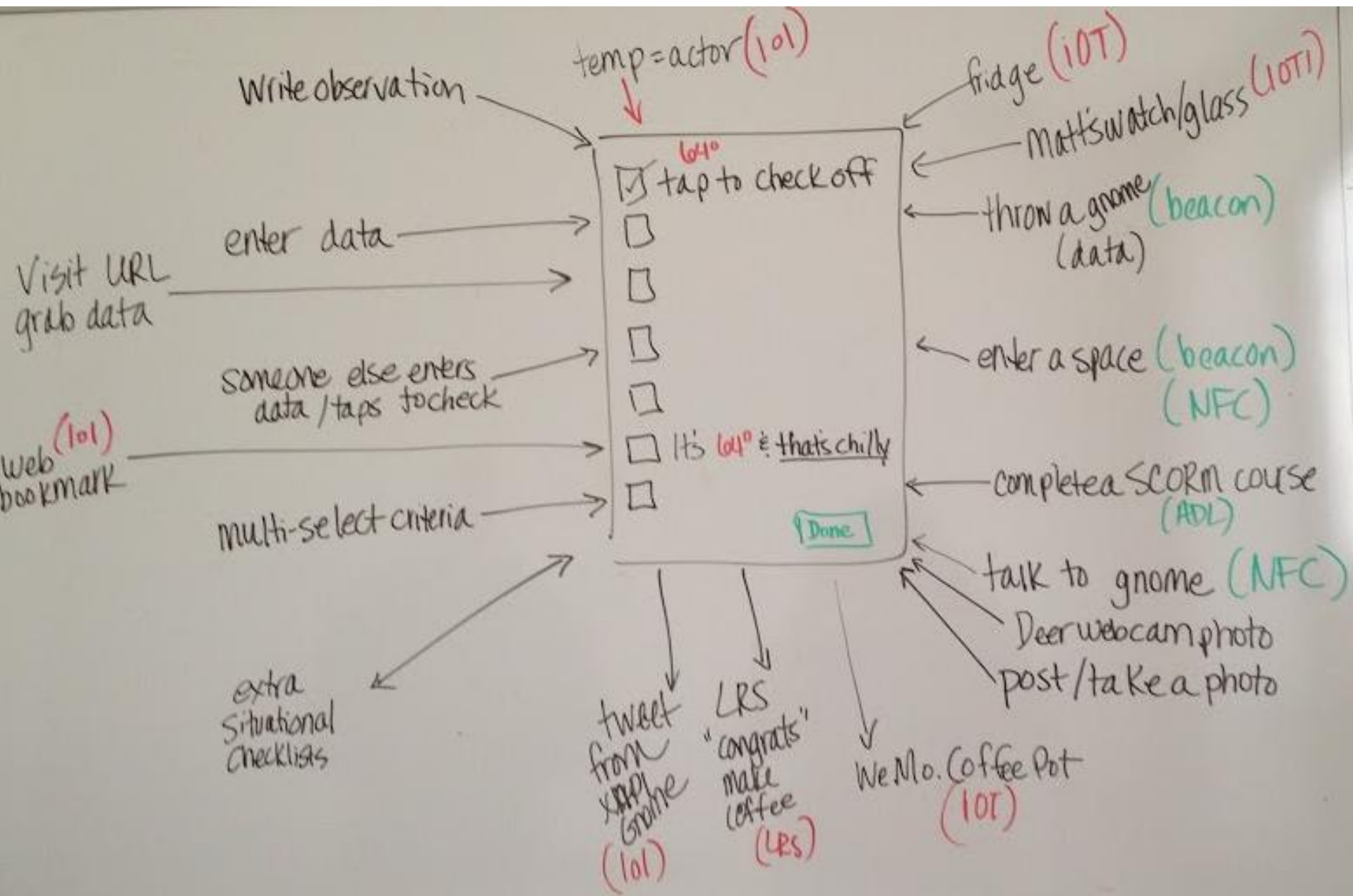
Watch a video

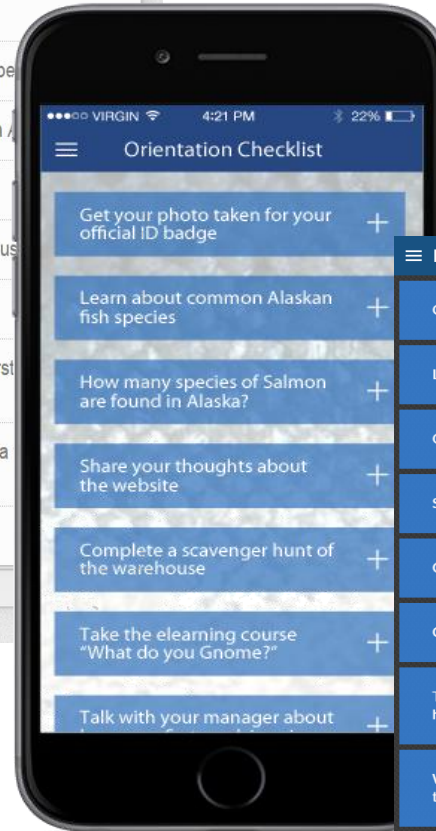
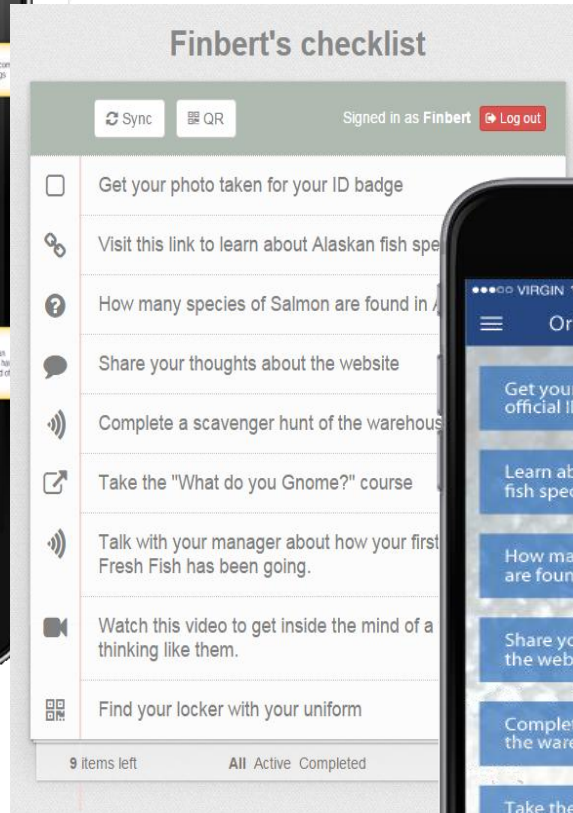
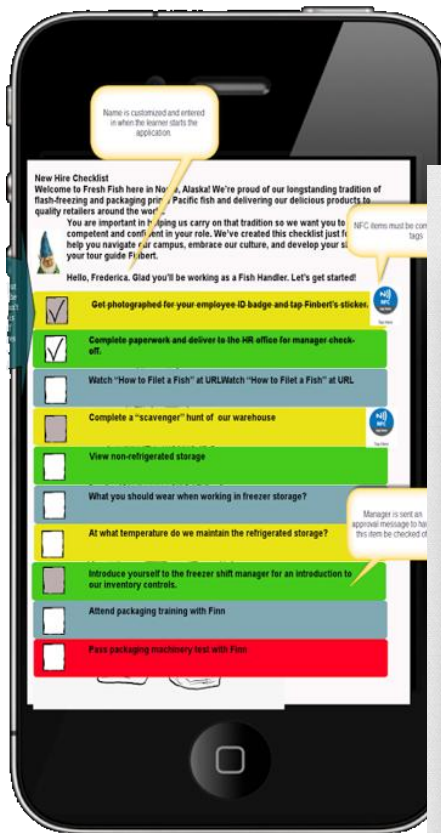
Job shadow

Follow a blog

Read a book







New Hire Checklist	
Get your photo taken for your ID badge	+
Learn about Alaskan fish species	+
Q. How many species of Salmon are found in Alaska?	+
Share your thoughts about the website	+
Complete a tour of the warehouse	+
Complete the "What do you Gnome?" course	+
Talk with your manager about how your first week at Fresh Fish has been going	+
Watch this video to get inside the mind of a fish and start thinking like them	+
Find your locker with your uniform	+
Read about how to clean a fish	+
Press a button on the TI SimpleLink	+



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My Checklists

About

Clear All (demo)

Complete All (demo)

Logout

☰ New Hire Checklist



Get your photo taken for your ID badge



Read all about salmon species



Answer this: How many species of salmon are found in Alaska?



Share your thoughts about the website



Complete a tour of the warehouse



Talk with your manager about how your first week at Fresh Fish has been going



Find your locker with your uniform



Read fish-cleaning Standard Operating Procedures



Practice stopping the line in case of emergency or quality issues



Throw a fish to the next workstation (Bean)



Checking Fish Quality Step 1: Find the fish in the freezer



Checking Fish Quality Step 2: Scan a fish for metal fragments



Checking Fish Quality Step 3: Throw a fish to the next workstation (Sensor Tag)



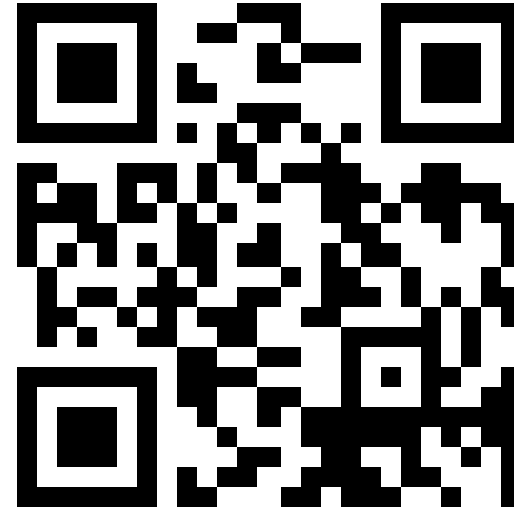
Checking Fish Quality Step 4: Press the "Awesome Quality Fish!" button.



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Follow us on Twitter!





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Checking Fish Quality Step 3: Throw a fish to the next workstation (Sensor Tag)



Checking Fish Quality Step 4: Press the "Awesome Quality Fish!" button.



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Follow us on Twitter!



Get your photo taken for your ID badge



✓ Go to the HR desk and ask FionaGnome to snap your mugshot.

✓ I'm done!

Press the button to check this item off your list.

Answer this: How many species of salmon are found in Alaska?



? Enter the number in the space below.

Enter text here.

Submit



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Read all about salmon species



Answer this: How many species of salmon are found in Alaska?



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Checking Fish Quality Step 2: Scan a fish for metal fragments



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Use Twitter to share your new hire onboarding with the world!



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Share your thoughts about the website



💬 Give a rating of the website, and summarize what you learned there.



Enter text here.

Submit



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Get your photo taken for your ID badge +

Read all about salmon species +

Answer this: How many species of salmon are found in Alaska? x

Enter the number in the space below.
Your response: 5

Complete a tour of the warehouse +

Talk with your manager about how your first week at Fresh Fish has been going +



xAPI Statement Viewer

Statement List

Get Statements ↺

Query Options



Show 25 entries

Search:

Timestamp	Name	Verb	Activity	Description	
a few seconds ago	Finbert	answered	5	Data entry item	+
Timestamp	Name	Verb	Activity	Description	

Checking Fish Quality Step 4: Press the "Awesome Quality Fish!" button. +

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Checking Fish Quality Step 1: Find the fish in the freezer

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Follow us on Twitter!

Complete a tour of the warehouse

Enter the warehouse through Entrance 19 by the non-refrigerated storage unit to get started.

A beacon will register your entrance and check this item complete.



Talk with your manager about how your first week at Fresh Fish has been going

This meeting will take approximately 30 minutes.

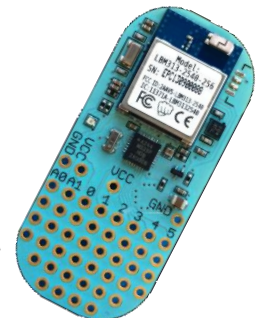
Use your phone to tap the NFC tag in your manager's office to check off this item.



Throw a fish to the next workstation (Bean)

Connect your phone to the Bean inside the fish. Pick up the fish. Throw the fish.

The motion of the toss will check this item off for you.





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Read all about salmon species

Answer
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Fish has

Find yo

Read fish-cleaning Standard Operating Procedures

Practice stopping the line in case of emergency or quality issues

Throw a fish to the next workstation (Bean)

Checking Fish Quality Step 1: Find the fish in the freezer

Checking Fish Quality Step 2: Scan a fish for metal fragments

Checking Fish Quality Step 3: Throw a fish to the next workstation (Sensor Tag)

Checking Fish Quality Step 4: Press the "Awesome Quality Fish!" button.

Use Twitter to share your new hire onboarding with the world!

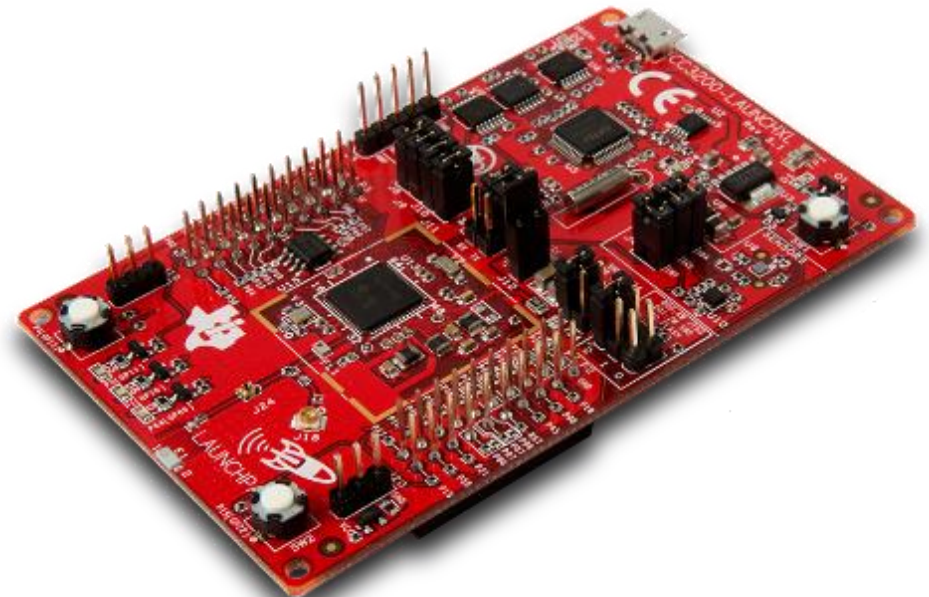
Follow us on Twitter!

Practice stopping the line in case of emergency or quality issues



Go to the TI SimpleLink and press Button 1 (on the left).

Once you press the button, the Red LED will light up. Click the sync button on this checklist, and this item should be marked complete.





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Checking Fish Quality Step 2: Scan a fish for metal fragments



 Connect your phone to the TI SensorTag inside the fish. Scan the fish for metal fragments.

Connect

Disconnect

The magnetometer will sense the presence of the magnet and mark off this item.

STATUS: SENSORTAG_ONLINE

Keypress:
[Waiting for value]

Temperature:
-256.00° C (-428.80° F)
+27.66° C (+81.78° F) [amb]

Accelerometer:
x: -0.024G
y: +0.007G
z: +1.049G





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Get your photo taken for your ID badge



Read

Answer

Alaska

Share

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Checking Fish Quality Step 3: Throw a fish to the next workstation (Sensor Tag)



Checking Fish Quality Step 4: Press the "Awesome Quality Fish!" button.



Use Twitter to share your new hire onboarding with the world!




Follow us on Twitter!



Use Twitter to share your new hire onboarding with the world!



 Tweet your success from your Twitter account. (You can use the pre-loaded text or enter your own.)



When you click the button and send the tweet, this item will be marked off.



WHAT WE LEARNED

Flexibility of display rocks



- Existing web tools make assembly & xAPI easy
- A plan + structure = easy peasy for instructional designers
- Flexibility of changing how things are displayed vs. the underlying verbs, activities, etc.
 - Activity statements
 - ADL statement viewer
- Shortcuts (rapid authoring tools, templates) are convenient... but limited and inflexible

WHAT WE LEARNED

User creation & authentication



- Everyone in the pool!
- Simple approach: name, email, password
 - Save progress
 - Query xAPI by email address

WHAT WE LEARNED

Reading data from the LRS



- Use callbacks: checklist items are only marked complete visually when the LRS says so
- Allows us to act upon the recording of individual xAPI statements as they occur

WHAT WE LEARNED

Sourcing our verbs

- Smart: Grammar counts
- Hard: There is no one source of all verbs
- Then: Make up your own



verbSource String	verb String
http://adlnet.gov/expapi/verbs/	completed
http://id.tincanapi.com/verb/	viewed
http://adlnet.gov/expapi/verbs/	answered
http://adlnet.gov/expapi/verbs/	commented
http://adlnet.gov/expapi/verbs/	completed
http://adlnet.gov/expapi/verbs/	attended
http://activitystrea.ms/schema/1.0/	find
http://activitystrea.ms/schema/1.0/	read
http://future-learning.info/xAPI/verb/	pressed
http://www.torrancelearning.com/xapi/	threw
http://www.torrancelearning.com/xapi/	threw
http://activitystrea.ms/schema/1.0/	open
http://adlnet.gov/expapi/verbs/	completed
http://future-learning.info/xAPI/verb/	pressed
http://id.tincanapi.com/verb/	tweeted
http://activitystrea.ms/schema/1.0/	follow

WHAT WE LEARNED

What is complete?



- Completion!?!?!?
- We built a “Complete All” button
- cmi5 “Complete” sent once all items are checked off
- What if new items are added?
- Checklist determines completion vs. LRS/LMS determining completion

