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Name: _____ Date: _____

Teacher Key

Computational Thinking

User Experience Scripts

C O D E

Figure out how to play this game by looking at the players' phrases below. Circle the matching parts and underline words that are different from player to player. The first matching section has been circled for you.

Player 1:

"I chose a lion, and rolled a six, then a four, then a two. That means I need to draw a black cupcake on my lion's tail."

Player 2:

"I chose a donkey, and rolled a three, then a two, then a one. That means I need to draw a yellow pineapple on my donkey's head."

Player 3:

"I chose a puppy, and rolled a five, then a three, then a five. That means I need to draw a pink salmon on my puppy's nose."

Using pattern matching and abstraction, make yourself a template for game play by writing up the circled parts of the other students' experiences, and leaving the underlined sections as blanks.

"I chose a _____, and rolled a _____, then a _____, then a _____. That means I need to draw a _____ _____ on my _____."

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Teacher Key

Computational Thinking

Lesson Assessment

C O D E

Look at the problems below. Circle the matching sections and underline the places where there are differences. Once you've done that, write a template to create more phrases with the same pattern.

The first one has been done for you.

---

1) Triangles have three sides. Squares have four sides.

_____ have _____ sides.

2) It's fun to read books. It's fun to read magazines.

It's fun to read _____.

3) I love my cat's whiskers. I love my dog's tail.
I love my horse's tail. I love my cat's tail.

I love my _____ _____.

4) There is a cloud in the sky that looks like a dragon.
There is a leaf in the water that looks like a heart.
There was a rock in the yard that looks like a heart.

There ____ a _____ in the _____
that looks like a _____.

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Teacher Key

Functional Instructions

Skills Sheet

C O D E

Example:

SKILL 1

1) Bead
2) Knot
3) Bead
4) Knot
5) Spacer
6) Knot

SKILL 2

1) Special Bead
2) Finishing Knot
3) _____
4) _____
5) _____
6) _____

PROGRAM

1) Skill 1
2) Skill 1
3) Skill 2
4) _____
5) _____
6) _____

There are several other ways. Can you find 2 more?

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Teacher Key

Fun-ctional Skills

Functions and Variables Assessment

C O D E

Below, you will find three sets of skills, and a program that calls them.

Use the New Program and the skills that go with it to figure out what the steps of the Original Program were. Fill out the steps of the Original Program appropriately.

ORIGINAL PROGRAM

1) one
2) stinky
3) cat
4) one
5) stinky
6) banana
7) face
8) smells
9) cat
10) _____
11) _____
12) _____
13) _____
14) _____

NEW

SKILL 1

1) banana
2) face
3) smells
4) _____
5) _____

SKILL 2

1) cat
2) _____
3) _____
4) _____
5) _____

SKILL 3

1) one
2) stinky
3) _____
4) _____
5) _____

NEW PROGRAM

1) Skill 3
2) Skill 2
3) Skill 3
4) Skill 1
5) Skill 2

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Group Name: _____

Teacher Key

Songwriting Worksheet

Using Lyrics to Explain Functions - Assessment

Song 1 Name: I'm a Nut

Chorus:

I'm a nut
I'm a nut
I'm a nut, I'm a nut, I'm a nut

Song 2 Name: Skip to my Lou

Chorus:

Lou, Lou, skip to my Lou,
Lou, Lou, skip to my Lou,
Lou, Lou, skip to my Lou,
Skip to my Lou, my darlin.

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Teacher Key

Real-Life Algorithms

Dice Race Activity

C O
D E

You can use algorithms to help describe things that people do every day. In this activity, we will create an algorithm to help each other understand the Dice Race game.

The hardest part about getting a problem ready for a computer can be figuring out how to describe real-life activities. We're going to get some practice by playing and describing the Dice Race game.

Read the rules below, then play a couple rounds of the Dice Race game. As you're playing, think about how you would describe everything that you're doing. What would it look like from the computer's point of view?

The Rules:

1) Set each player's score to 0.
2) Have the first player roll.
3) Add points from that roll to player one's total score.
4) Have the next player roll.
5) Add points from that roll to player two's total score.
6) Each player should go again two more times.
7) Check each player's total score to see who has the most points.
8) Declare Winner.

Game 1

Example:

	Turn 1	Turn 2	Turn 3	Total
Player 1	3 (+3)	5 (+2)	9 (+4)	9
Player 2	4 (+4)	10 (+6)	12 (+2)	12

Circle the Winner

Game 2

Example:

	Turn 1	Turn 2	Turn 3	Total
Player 1	6 (+6)	9 (+3)	13 (+4)	13
Player 2	1 (+1)	6 (+5)	8 (+2)	8

Circle the Winner

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Dice Race

Assessment Worksheet

Teacher Key

C O D E

Use the space below to play through the Dice Race game.

When you're done, use the bottom of the page to create an algorithm (list of steps) that someone else could use to learn how to play.

	Turn 1	Turn 2	Turn 3	Total
Player 1	3	8	14	14
Player 2	1	7	12	12

Circle the Winner

Now, take the steps that you've used to play the game above, and write them down in the slots below. Take advantage of the repeat loop to avoid having to write down instructions more than once.

Step 1 : Set scores to 0

Repeat 3 times

Step 2 : Roll Player 1

Step 3 : Add roll to P1 total score

Step 4 : Roll Player 2

Step 5 : Add roll to P2 total score

Step 6 : Compare scores

Step 7 : Circle Winner

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Teacher Key

The Internet

How the Internet Does What it Does

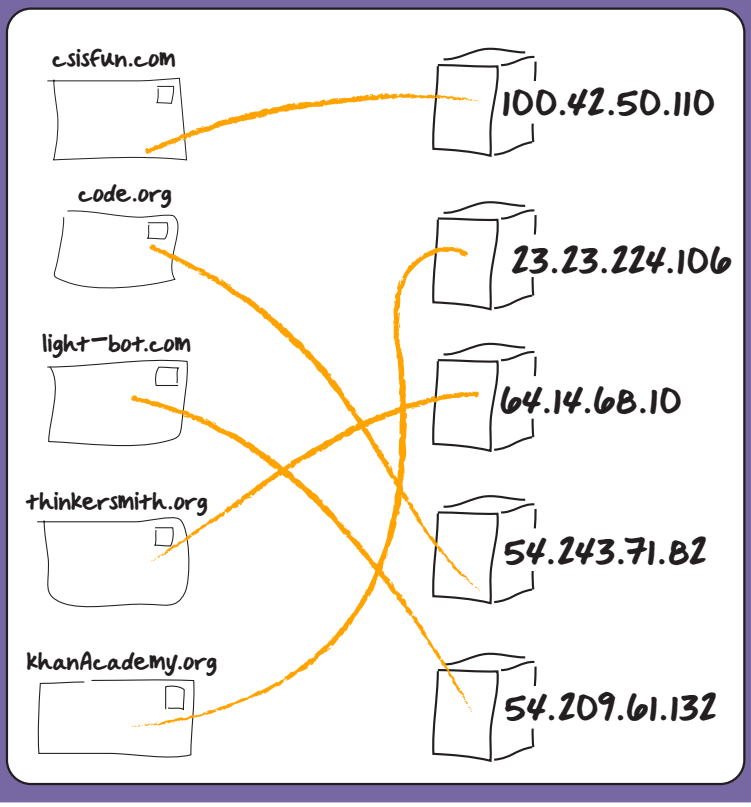
C O
D E

The DNS has gone out, and now you're in charge of delivering information all over the Internet! Use the DNS Look-Up Table to figure out where each packet is supposed to go.

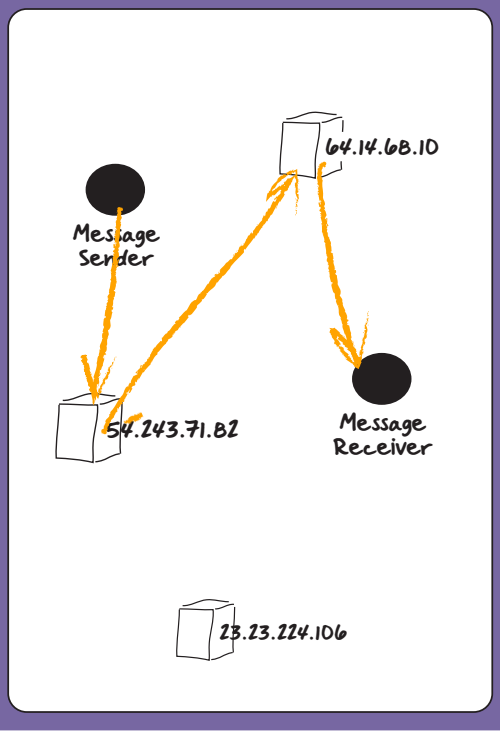
DNS Look-Up Table

#	URL	IP ADDRESS
1	code.org	54.243.71.82
2	csisfun.com	100.42.50.110
3	thinkersmith.org	64.14.68.10
4	light-bot.com	54.209.61.132
5	khanAcademy.org	23.23.224.106

Draw a line from each packet to the server where it is supposed to be delivered. The first one has been done for you.



This message is being delivered from someone at code.org to someone at thinkersmith.org. Draw the path that the message is likely to take.



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Name: _____ Date: _____

Teacher Key

Digital Citizenship

Assessment Worksheet

C O D E

Just because you **can** do something online doesn't mean that you **should**!

Cross out the information that you should not share online. Use the words that are leftover as the key to what you should find in the word search.

WORDS

~~1) Your Credit Card Info (CARD)~~
2) Your Online Name (NICKNAME)
3) What You Ate Today (FOOD)
~~4) Your Email (EMAIL)~~
5) Your Favorite Color (COLOR)
6) The Last Book you Read (BOOK)
~~7) The School You Attend (SCHOOL)~~
8) Your Favorite Band (BAND)
~~9) Your Phone Number (PHONE)~~
~~10) Your Address (ADDRESS)~~
~~11) Your Birthday (BIRTHDAY)~~

D	N	L	M	W	U	R	E	C	D
U	F	I	D	V	V	H	C	O	N
C	J	Y	C	I	U	A	M	L	A
G	A	S	R	K	N	K	O	O	B
T	X	R	P	D	N	X	R	R	P
D	N	J	Y	X	I	A	I	B	T
E	O	R	N	X	I	E	M	W	P
D	K	O	Q	K	D	N	D	E	T
J	Z	C	F	O	B	I	K	E	G
W	P	V	C	I	Y	V	E	J	A

Write a paragraph in the area below, telling about what you will do when you're on the Internet to make sure that you practice kind and respectful behavior.

This can come from the lesson, or be additional items that the students have learned.