Announcements

- Assignment 4 due Thursday Oct 28
- Videos and online quiz for next class

Pig and Panda arrays

- Two arrays, animals are in the arrays from left to right as seen

Review 1 - What is the code for?

- Code for Pigs to turn right one pig at a time?
Review 1 – What is the code for?

- Code for Pigs to turn right one pig at a time?
  - Use a “for each in” loop
  - Name a loop variable – I chose **onePig**

Review 2 – What is the code for?

- Code for Pandas to bow **at the same time** (turn forward a little, then turn backward)?
  - Use “each in together” loop
  - Name a loop variable – I chose **onePanda**

Q1 – Questions about variables

- What is the difference between a const variable and a variable?
- Which Alice construct do you use to change a variable?
Q1 – Questions about variables

• What is the difference between a const variable and a variable?
  – Const variable can only store one value when it is created
  – Variable can store a value that can change
• Which Alice construct do you use to change a variable?
  – Assign tile

Q2 - What is the output of this code?

• Pig says: 3

Q3 -- Consider this code. Why isn’t somenum a choice?

• It is not in scope! It is not in the do in order!
Q3 – Consider this code. Why isn’t somenum a choice?

• It is not in scope! It is not in the do in order!

Q4 – How do I write an array index loop to have each pig turn right once?

• Fill in the missing code:

```python
do in order
    do in order
        count up to this.pigArray.length
        loop
```

Pig and Panda arrays again

• Two arrays, animals are in the arrays from left to right as seen

Q4 – How do I write an array index loop to have each pig turn right once?

• Use a count loop
  – Create a variable set to 0
  – Use the variable to index in the array
  – Update the variable by 1 in the loop
Q4 – How do I write an **array index loop** to have each pig turn right once?

- **Or could use a for each in loop**
  - Create a variable set to 0
  - Use the variable to index in the array
  - Update the variable by 1 in the loop

Q4 – How do I write an **array index loop** to have each pig turn right once?

- **OR could use a while loop**
  - Create a variable set to 0
  - Use the variable to index in the array
  - Update the variable by 1 in the loop

Q5 – How do I write code to have each pig turn right once one at a time, with one of the pandas turning with each pig?

- **Fill in missing code:**

Q5 – How do I write code to have each pig turn right once one at a time, with one of the pandas turning with each pig?

- **Use any type of array index loop**
Q5 continued

- Notice the pigs and pandas arrays must be the same size for this to work!

Q6 – What does this code do?

- each pig moves up and down one at a time with the next pig moving one unit more. That is, the first pig 0 units, second pig 1 unit, third pig 2 units, etc.

- NOTE: Use an array index loop in two places – One for index, one for how far to move up/down
Q7 – How do you write code to color every other panda green in array?

- Start with no color

- Color every other green (1st one, 3rd one, etc.)

Q7 – How do you write code to color every other panda green in array?

- What is the missing line of code?

- One way, use array index, increment by 2
- Must use while loop, doesn’t work w/count loop

Another possible way?
How do you write code to color every other panda green in array?

- Another way? Does this work?

How do you write code to color every other panda green in array?

- Correct Code – update someIndex

Class Today

- Array of penguins