

Climate Change

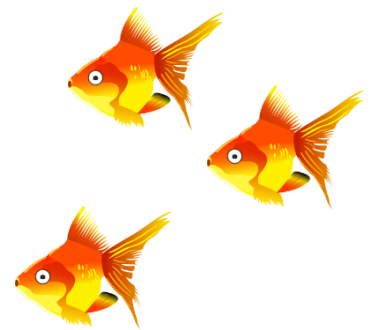
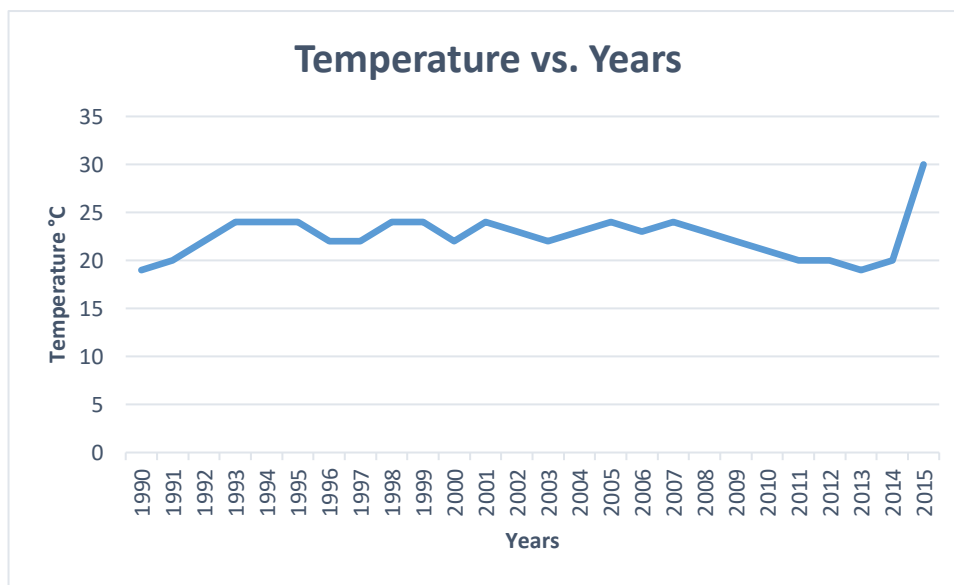
Name _____



Go to howabouthscience.com, click on “Lessons and Units”, “Life Science” and choose “Climate Change.” Answer the questions as you explore the videos and links.

Read the paragraph and answer the questions about the graph below.

A large number of goldfish live together in a pond. The pond is a great place to live when the temperature is between 18°C and 30°C (64°F and 86°F). If the temperature moves out of this range the goldfish population begins to drop. Examine the graph below and answer the questions that follow.



1. What might cause the goldfish population to drop if the temperature moves out of its normal range? Name three things.

A.

B.

C.

2. Is the temperature in the "safe zone" for the goldfish? Is there any cause for concern? Explain.

3. Most of the graph seems to be in what we might describe as a "normal cycle." Why would we refer to some years as "normal," and which years would you place in this category?

4. Which year or years would you describe as abnormal? Why?



5. What would you expect to see with regard to the temperature of the pond in years 2017 and 2018? How would this affect the goldfish population?

6. After the temperature reaches 30°C, why do you think the goldfish begin to die off?

Click, “What’s the hottest Earth has been lately?” and answer the questions.

1. See the graph that looks like a roller coaster? Look familiar? Scroll down a bit and you will a more scientific version of the same graph. It is very similar to the graph of the temperature of the goldfish pond. Describe what this graph is showing us. (YA means “years ago”)

2. As in the goldfish graph, there is a sudden jump in temperature at the end. Why should we be concerned about this?

3. When was the last time the Earth has been this warm? How are scientists able to piece together global average temperatures from so many years ago?

4. The “little ice age” ended in 1850 and then Earth’s temperature rose slowly for awhile. Over the past century though, what has happened to Earth’s temperature?

5. What may have caused this sudden change in temperature? (What has been increasing over this same time period?)

Watch, “Climate Change: Crash Course Kids #41.2

1. What is the difference between weather and climate?

2. What is climate change?

3. How might a change in climate affect a cactus? Why?

4. What happens to the other organisms if the cactus disappear?



Watch “Earth has a Fever” and answer the questions.

1. Why do scientists say that the Earth has a fever? How high could Earth's fever get?
2. What is causing Earth's temperature to rise?
3. As temperatures rise, what is happening to snow and ice? Why is this a problem?
4. What are some other evidences of planetary fever?

Watch “Usual Suspects” and answer the questions.

1. In the past, what caused changes in the Earth's temperature and weather patterns?
2. What is causing the same changes today?

Watch “Gas Problem” and answer the questions.

1. What do we call gases that trap the sun's heat and warm the Earth? Why is that a good thing?
2. What are two examples of greenhouse gases?
3. What are fossil fuels?
4. Why are fossil fuels a problem?

Watch “Sea Level Rise” and answer the questions.

1. As global temperatures go up, what are two things that occur to cause sea levels to rise?
2. How much can a child born today expect the sea levels to rise during their lifetime?



3. Why are rising ocean levels a problem?

Watch “Climate Change 101 with Bill Nye” and answer the questions.

1. What has caused the Earth's climate to change throughout history?
2. How is climate change today different from the smaller variations that have occurred in the past?
3. How much warmer has the Earth gotten in the last century?
4. What do 97% of all climate scientists believe is behind this rise in temperature?
5. What human activity or activities is (are) the main problem?
6. What is ocean acidification? Why is this a problem?
7. As temperatures rise so do sea levels. What two factors cause sea levels to rise?
8. How does climate change affect weather?
9. What are five things you can do to stop climate change?

1★

2★

3★

4★

5★

Click on “Climate Time Machine.” Move the slider and make an observation of the changes you see in each category.

Sea Ice	Sea Level	Carbon Dioxide	Global Temperature