**Answers to FCAT Science Sample Questions**

1. **D 8. A**
2. **B 9. C**
3. **B 10.A**
4. **D 11.B**
5. **C 12.C**
6. **C 13.B**
7. **B**

**“FAT-CAT” Review Answers**

**PAGE 3 PAGE 4 PAGE 5 PAGE 6 PAGE 7**

1. **D 1. C 1. B 1. B 1. B**
2. **C 2. D 2. C 2. A 2. D**

 **PAGE 8 PAGE 10 PAGE 11 PAGE 12 PAGE 13**

1. **C 1. B 1. C 1. C 1. C**
2. **D 2. C 2. A 2. B 2. C**

**PAGE 14 PAGE 16 PAGE 17 PAGE 18 PAGE 19**

1. **D 1. B 1. A 1. C 1. B**
2. **B 2. D 2. B 2. B 2. A**

**PAGE 20 PAGE 22 PAGE 23 PAGE 24 PAGE 25**

1. **D 1. B 1. A 1. D 1. A**
2. **C 2. C 2. C 2. B 2. D**

**PAGE 25 Short Response:**

**The hill near Samantha’s house was no longer pointed because of weathering. Rain, snow, wind, and ice are types of weather that cause changes to Earth’s surface.**

**PAGE 26**

**PART A: The bottle in Felicia’s experiment showed how water expands and cracks the bottle.**

**PART B: The same thing happens to rocks when water freezes inside their cracks and openings. The water in the cracks expands and breaks up the rocks.**

**PAGE 27 PAGE 28 PAGE 31**

1. **B 1. A 1. A**
2. **D 2. D 2. D**

**PAGE 32 Short Response**

**Due to the tilt of the Earth and the direction of sunlight energy, this part of the Earth is getting less DIRECT RAYS from the sun. The Northern Hemisphere is having summer. The Southern Hemisphere is tilted more toward the sun, and getting more direct rays from the sun, so the Southern Hemisphere is having summer.**

**PAGE 33 PAGE 34 PAGE 35 PAGE 36 PAGE 38**

1. **A 1. D 1. C 1. D 1. B**
2. **B 2. C 2. D 2. A 2. C**

**PAGE 39 PAGE 40 PAGE 41**

1. **B 1. C 1. D**

**2.D 2. C**

**PAGE 42 Short Response**

**(You would only need to write about 2 or so items AND explanations needed) \*\* \* Both are vertebrate animals because they have backbones and an**

 **internal skeletal structure.**

* **Both animals have strong rear legs, which help them to move or hop.**
* **Both have eye that help them sense the world around them.**
* **Both have lungs to breathe air.**

**Extended Response**

**Comparing grass and a palm tree:**

* **Both have a root system under the ground to absorb water and nutrients.**
* **Both have leaves to use during photosynthesis.**
* **Both have a seed to reproduce.**
* **Comparing a rose bush and a cactus plant: both have thorns & flowers**

**PAGE 43 PAGE 44 PAGE 46 PAGE 47**

1. **B 1. B 1. B 1. B**
2. **D 2. C 2. A 2. D**

**PAGE 48**

1. **SHORT RESPONSE**

**One animal could be a polar bear because of its insulating layers of fat and thick fur. Another adaptation the polar bear has is the white fur that allows it to camouflage in the white snow. A third structural adaptation is the thick padding on its paws that protect its paws from the cold ice or snow on which it walks. The penguin uses many structural adaptations. For example, the ability to swim quickly in ice-cold water allows it to escape from prey. The blubber acts as an insulator from the cold temperatures. Its webbed feet combined with the fat on the belly are structural adaptations that protect the eggs from the elements.**

**4. SR (Only two of the following points need to be explained) An owl has many structural adaptations that help it survive as a consumer. First it has excellent vision for night hunting as well as peripheral vision. Its talons also are strong and sharp for clasping prey. The wings of an owl are designed so that the owl can swoop down on its prey with little noise.**

**PAGE 49**

1. **C**
2. **D**

**PAGE 50 SHORT RESPONSES**

1. **Green plants create their own energy using the process called photosynthesis.**
2. **Group 2 reacted this way because of a lack of sunlight. When sunlight was removed, the leaves were unable to photosynthesize and so the plant started to die. The healthy plants in Group 1 had what they needed to survive: water, sunlight and air.**

**PAGE 51 PAGE 52 PAGE 53 PAGE 54 PAGE 55**

1. **C 1. D 2. D 1. A 1. B**
2. **B 2. C**

**PAGE 56 PAGE 57**

**2.D 1. A**

 **2. C**

**PAGE 58 SHORT RESPONSES**

1. **The elephant’s trunk allows it to obtain water while still being able to keep its head high to look out for danger. Elephants travel in groups called herds. This protects the youngest or the weakest elephants. Elephants also have a thick tough skin, which allows them to retain water longer. Most elephants are skillful swimmers as well. This behavioral adaptation is passed on to its offspring.**
2. **A pet cat might establish its territory by spraying a scent on nearby trees. It might also hiss at another cat to tell It to stay away. When it arches its back and has its hair stand straight up, it appears bigger thus scaring another cat away. The tiger might use its roar to scare away other tigers. It also might scratch a tree at a boundary to mark its territory and leave a scent for other tigers.**

**PAGE 59 PAGE 60 PAGE 61 PAGE 65 PAGE 66**

1. **A 1. D 2. B 1. A 1. D**
2. **B 2. B 2. C**

**PAGE 67**

1. **D**

**PAGE 67 SHORT RESPONSE**

1. **It is important in the scientific community to communicate results. This helps other scientists that are working on similar projects to learn from one another. It helps scientists to use their time wisely and not repeat experiment that have already been done successfully.**

**PAGE 68 EXTENDED RESPONSE**

1. **1. Record the starting temperature on the thermometer in each box.**

**2. Place the boxes in the sunlight and on the same surface.**

**3. Wait for a set period of time, such as five minutes and record the temperature on the thermometer in each box.**

**4. Wait for another set period of time and record the temperature again.**

**5. Compare the results of the data that was collected.**

**6. Make a list of the observations that could be made regarding the various boxes and the temperatures.**

**7. From these observations, the class could be able to make some conclusions on whether the color of the box affected the temperature or not.**

**PAGE 69 PAGE 70 PAGE 71 PAGE 72 PAGE 73**

1. **A 1. C 1. A 2. C 1. B**
2. **A 2. B**

**PAGE 73 SHORT RESPONSE**

**Students should list at least 2 to three changes. Some examples of changes are:**

**1. The island could have move visitors since it is easier to get to the island**

**2. The island could have traffic problems due to more cars**

**3. The ferryboat may stop running since people can drive to the island.**

**4. More people would like to live on the island since it is easier to get there**

**5. The island may have to hire a traffic officer to direct the traffic**

**PAGE 74**

1. **C**

**PAGE 74 SHORT RESPONSE**

1. **The class needs to measure the amount of water, the height of the rocket after launch and how much air pressure is pumped into the rocket.**