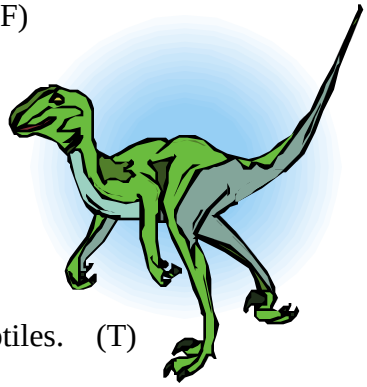
THE WORLD OF THE DINOSAURS TEACHER'S GUIDE

The *World of the Dinosaurs* is a program designed for kindergarten through third grade classes. Emphasis will be on the dinosaurs themselves. What were they like? How big were they? What did they eat? When did they live? Attention will also be given to creatures that were not dinosaurs but are mistaken for them.

This program is two part in structure. The first half is done outside the planetarium and involves some dinosaur bone reproductions, teeth, skin impressions and various models. It is presented live and questions are taken throughout. Part two takes place inside the planetarium. It consists of a 20 minute taped program on dinosaurs and makes a well-rounded and enjoyable finish to the program. The taped section ends with a short question and answer period, as well as a brief discussion about the extinction of the dinosaurs 65 million years ago.

TRUE OR FALSE STUDY QUESTIONS



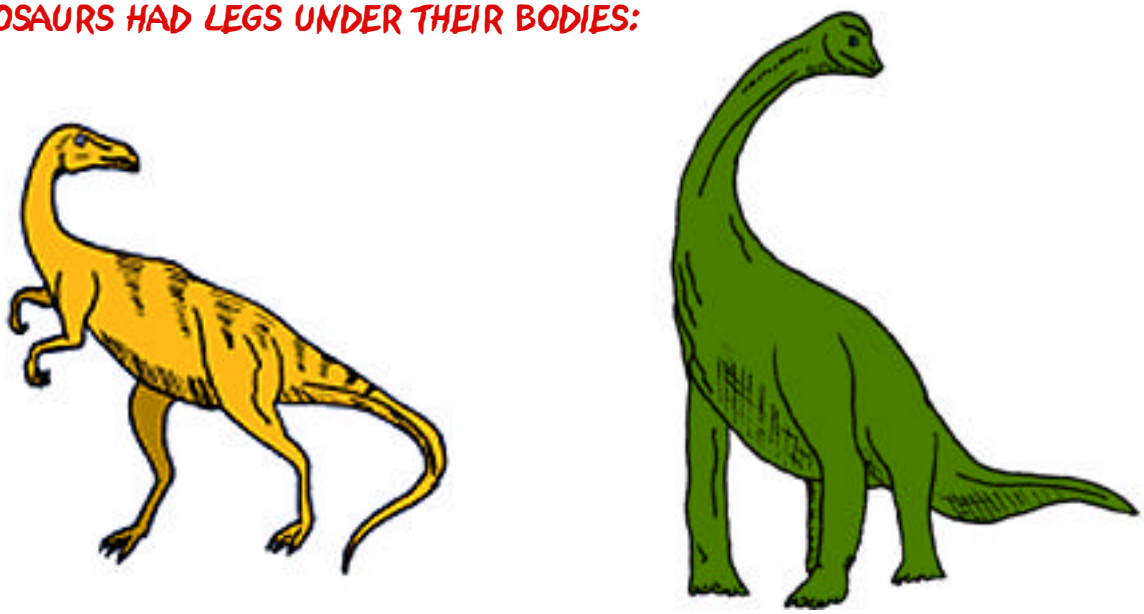
1. Dinosaurs lived at the same time as cavemen and cavewomen. (F)
2. All dinosaurs were very large. (F)
3. Dinosaurs laid eggs. (T)
4. We now call the Brontosaurus the Apatosaurus. (T)
5. All dinosaurs had small brains and were stupid creatures. (F)
6. The flying pterodons were not really dinosaurs but were flying reptiles. (T)
7. All dinosaurs were slow and clumsy creatures. (F)
8. Woolly mammoths and saber-toothed tigers lived at the same time as the dinosaurs. (F)
9. Scientists believe that Apatosaurus (Brontosaurus) spent most of its time wading in the water and in swamps. (F)
10. Plesiosaurs were swimming reptiles and were not dinosaurs. (T)
11. The two types of animals alive today that are most closely related to the dinosaurs are reptiles and birds. (T)
12. Scientists that study bones and fossils are called Paleontologists. (T)

WHAT'S THE DIFFERENCE BETWEEN DINOSAURS AND REPTILES?

The most common answer to this question is size. But actually, this is not the correct answer. While most dinosaurs were huge, there were many that were also small. The smallest dinosaur, Compsognathus, was no larger than a chicken!

The biggest *real* difference between the dinosaurs and reptiles is the way that their legs attached to their bodies.

DINOSAURS HAD LEGS UNDER THEIR BODIES:



REPTILES HAVE LEGS THAT COME OUT OF THE SIDES OF THEIR BODIES:

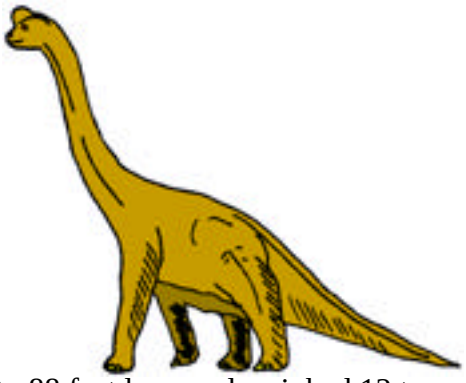
Would this have made the dinosaurs walk differently than today's reptiles? How?

SOME FAMOUS DINOSAURS

PLANT EATERS:

Ankylosaurus (ang-kile-uh-SAWR-us) 17 feet long and weighed 5 tons. This was the most heavily armored dinosaur.

Apatosaurus (ah-PAT-uh-SAWR-us) 70 feet long and weighed 25-30 tons. This dinosaur was once called the Brontosaurus.



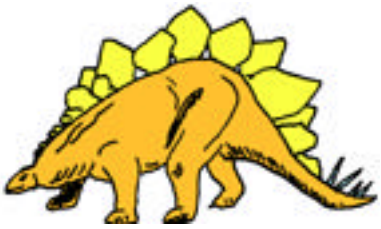
Brachiosaurus (BRAK-ee-uh-SAWR-us) 75 feet long and weighed 75 tons. One of the largest dinosaurs, Brachiosaurus has an identifying bump on his head.

Diplodocus (dih-PLOD-uh-kus) 88 feet long and weighed 12 tons. Diplodocus may have had a hole in its forehead for breathing while eating. It also had a long whip-like tail.

Hadrosaurus (HAD-ro-SAWR-us) 30 feet long and weighed 3 tons. The first dinosaur found in North America.

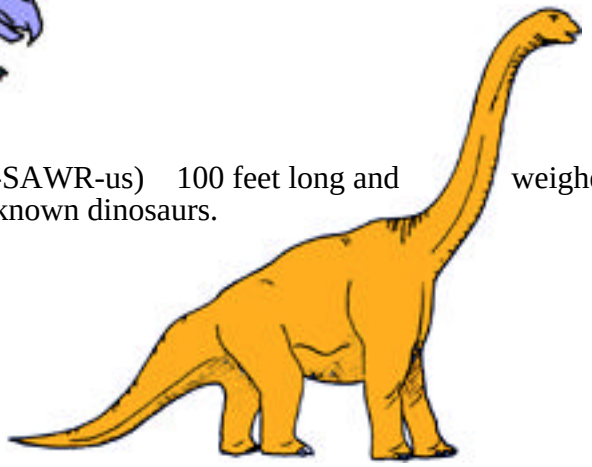
Iguanodon (I-GWA-no-don) 29 feet long and weighed 5 tons. Iguanodon was one of the first dinosaurs discovered. It had sharp spiked thumbs for defense.

Stegosaurus (STEG-uh-SAWR-us) 30 feet long and weighed 2 tons. Stegosaurus had large plates on its back that helped to cool its body.



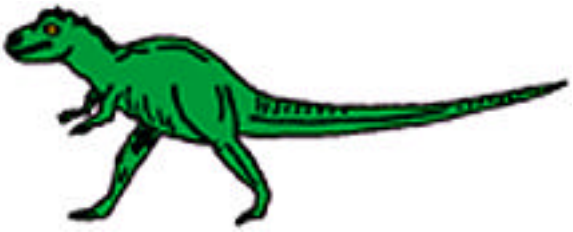
Triceratops (try-SAIR-uh-tops) 30 feet long and weighed 8 tons. Triceratops had two long horns and a beak. It was one of the last dinosaurs to become extinct.

Ultrasaurus (UL-truh-SAWR-us) 100 feet long and weighed 80 tons. Ultrasaurus was one of the largest known dinosaurs.



MEAT EATERS:

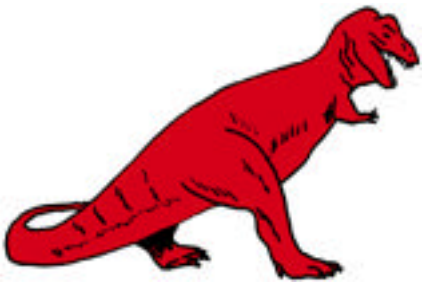
Allosaurus (AL-uh-SAWR-us) 36 feet long and weighed 2-3 tons. A medium sized meat eater that has been found in abundance throughout North America.



Compsognathus (komp-sug-NAY-thus) 2 feet long and weighed 6 pounds. The smallest dinosaur, about the size of a chicken.

Deinonychus (dine-ON-ik-us) 9 feet long and weighed 175 pounds. It had a big sickle-shaped claw it used to attack its prey.

Megalosaurus (MEG-ah-lo-SAWR-us) 30 feet long and weighed 3 tons. One of the first to be discovered.



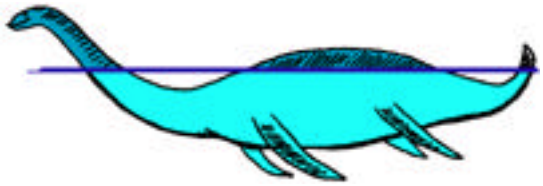
Tyrannosaurs (tye-RAN-uh-SAWR-us) 45 feet long and weighed 8 tons. One of the largest meat eating dinosaur, it had teeth six inches long.

SOME FAMILIAR NON-DINOSAURS:

Dimetrodon (di-met-TRO-don) 12 feet long. Dimetrodon was *not a dinosaur*, it was a reptile that lived before the dinosaurs. It had a large fin on its back for cooling. It was a meat eater.

Pteranodon (ter-AN-o-don) 35 foot wingspan. Pteranodon was the largest flying reptile. *It was not a dinosaur.*

Plesiosaur (ples-EE-o-SAWR) 10-15 feet long. Plesiosaur were sea-going reptiles that lived at the same time as the dinosaurs. *They were not dinosaurs.* Some people think that the Loch Ness monster could be a plesiosaur.

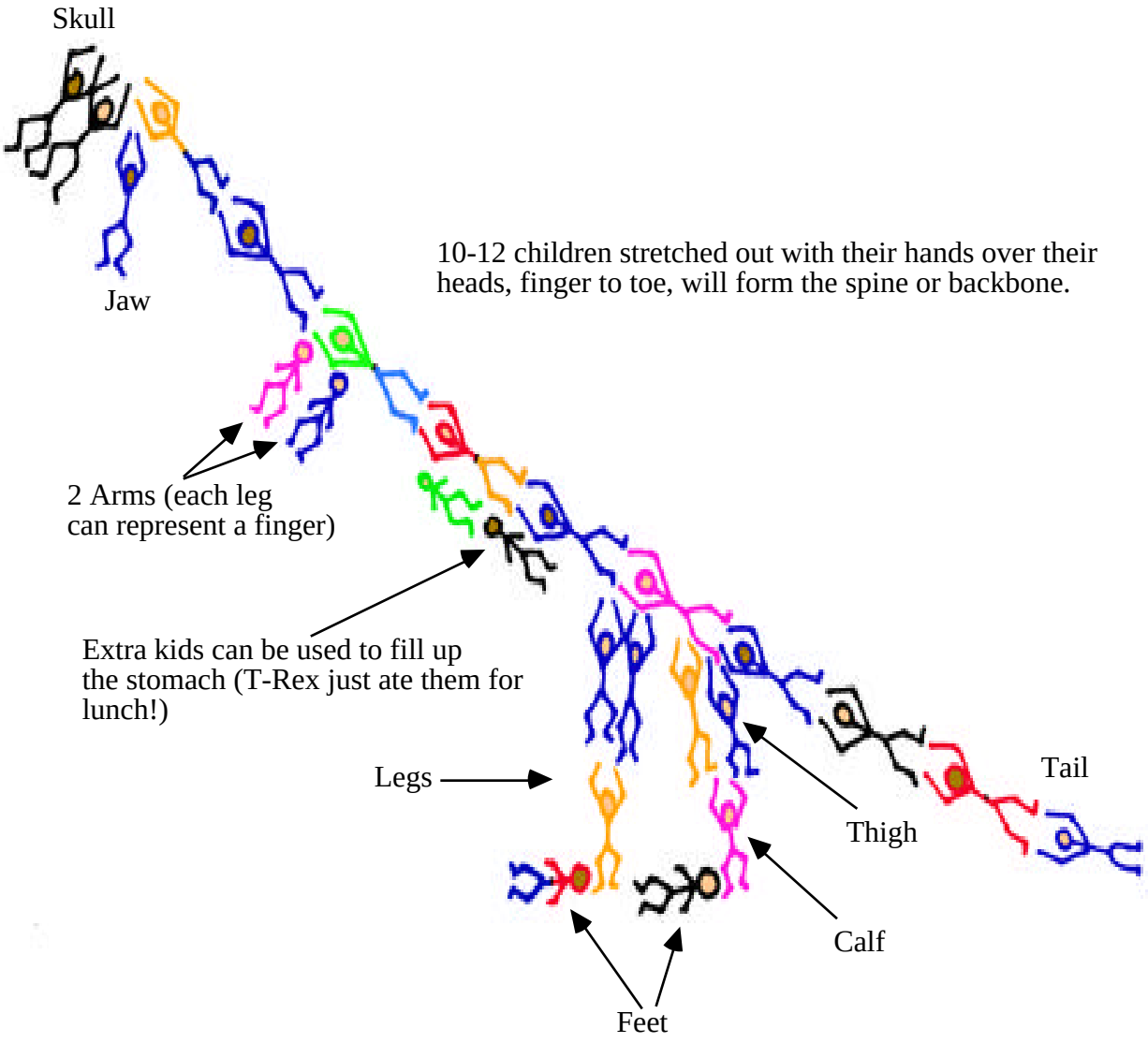


Woolly Mammoth 15-18 feet long and weighed 7 tons. It lived after the dinosaurs. It was a mammal related to the elephant.

A LIFE SIZED MODEL OF TYRANNOSAURS MADE OF KIDS!

MATERIALS NEEDED:

- Approximately 25 children who are eager to learn about dinosaurs.
- A clear, *CLEAN* floor space approximately 40 feet by 20 feet.



DINOSAUR WORD SEARCH PUZZLE

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L	**W**	**N**	**J**	**T**	**N**	**G**	**Q**	**F**	**L**	**N**	**K**	**R**	**R**	**M**	**I**	**K**	**G**	**F**	**C**
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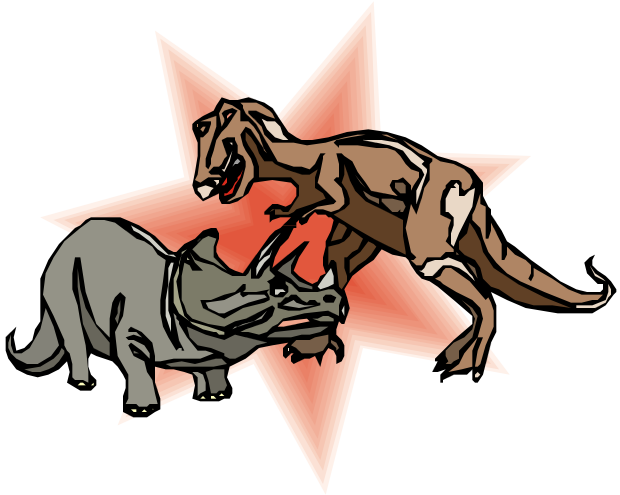
Find these words:

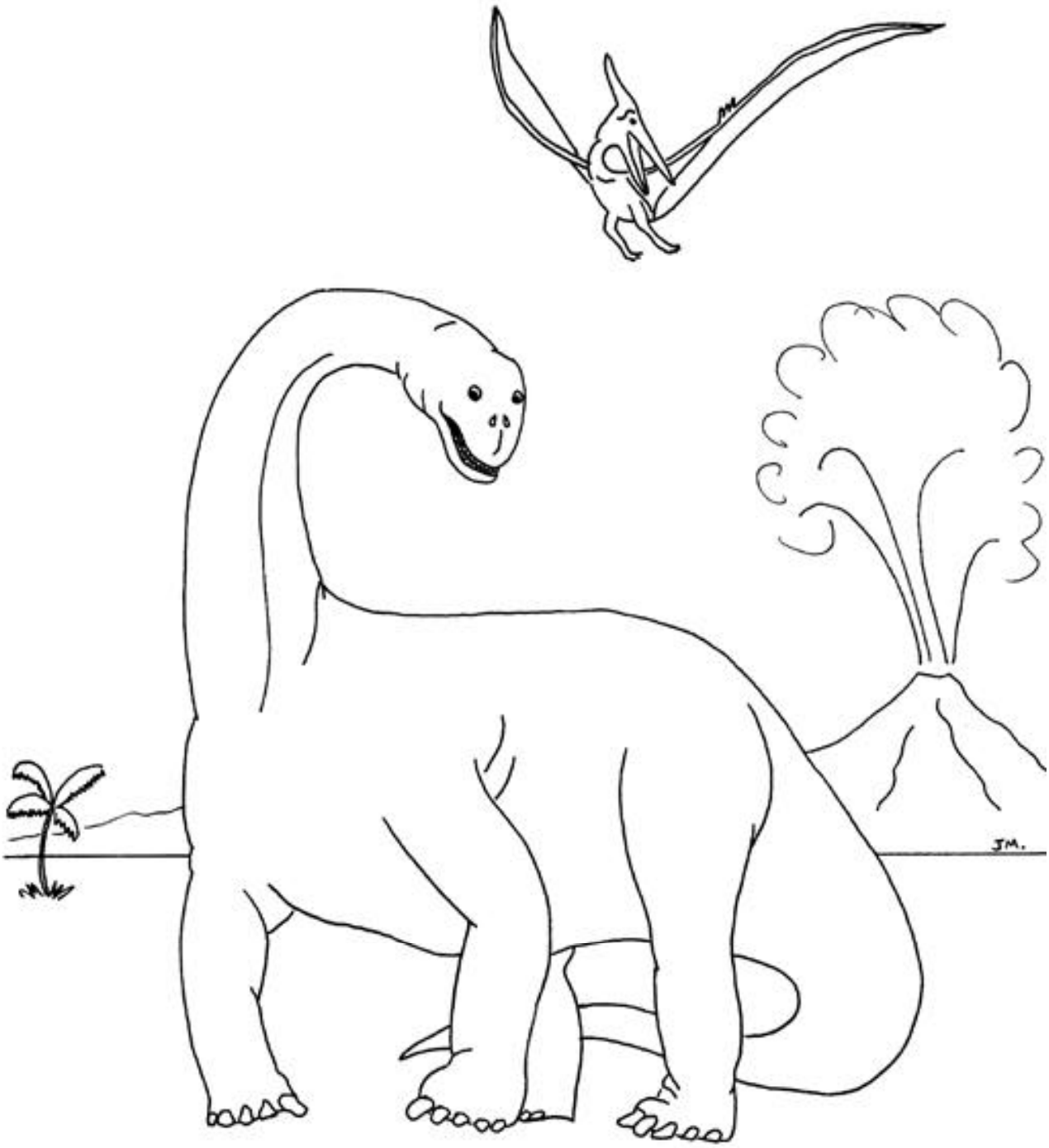
APATOSAURUS
STEGOSAURUS
TYRANNOSAURUS
TRICERATOPS
DIPLODOCUS
PTERANODON
EXTINCT
TEETH
BIG
BONES
HORNS
CLAW



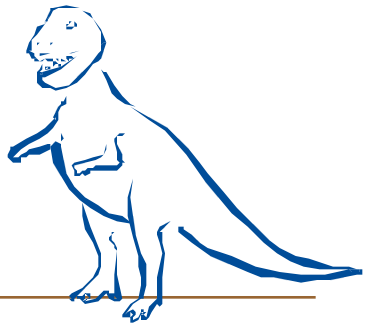
MEAT
PLANTS
REPTILE
DINOSAUR
MAMMALS
PREHISTORIC
TRACKS
SKULL
SMALL
EGGS
PLATES
TAIL

GOOD LUCK!!

COLOR US !



BIBLIOGRAPHY FOR DINOSAUR LOVERS



Each entry is followed by a code letter: A-adult level book, T-teacher oriented book, Y-youth oriented book.

Alvarez, Walter, *T. Rex and the Crater of Doom,* New York: Vintage Books, 1997. (TA)

Bakker, Robert T., *The Dinosaur Heresies*, New York: Zebra Books, 1996. (TA)

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Weishampel & Young, *Dinosaurs of the East Coast,* Baltimore: John Hopkins University Press, 1996. (TA)

Planetarium Program Evaluation

After the Northern Stars Planetarium has visited your class, please take a moment to fill out this evaluation. Your suggestions are very valuable to us!

Mail the completed evaluation to :.....Northern Stars Planetarium
15 Western Ave.
Fairfield, Maine 04937

Or Email To :.....info@northen-stars.com

1. Show Name: _____

2.Group grade/age level:_____

3. Was the material presented at an appropriate level for your class? _____

4. Was the amount of material discussed: Enough Overwhelming Not Enough

5. Should any parts of the presentation be developed further? _____. If so, which parts?

6. Was there sufficient time for questions and answers? Yes No

7. Were you studying astronomy or another related subject at the time of the planetarium's visit?

Yes No

If so, was the planetarium visit helpful? _____

8. Was the Teacher's Guide helpful in preparing your class for the planetarium visit? Yes No

Which parts were most helpful? _____

Which parts were least helpful? _____

9. Did the presenter present the material in a clear and understandable fashion? _____

10. How would you rate the overall program given to your class in the planetarium? _____

_____

11. (Optional) Your name & school:_____

Thank you for your time! Your Comments Make a Difference!