1st Grade Balance & Motion

Read and answer each question carefully.

1) A top is a ________________ object.
   
   A) spinning
   B) rolling
   C) balancing
   D) pulling

2) If you added a clothespin to the tail of this crayfish, what would happen?

   A) The crayfish would fall over.
   B) The crayfish would rock back and forth.
   C) The crayfish would stay balanced.
   D) The crayfish would tip to one side.
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3) Which mobile is balanced?

A)

B)

C)

D)
4) Which of these shapes shows a stable position?

A) 

B) 

C) 

D)
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5) How will the marble roll through this runway?

A) The marble will roll to the end of the runway.
B) The marble will stop at the top of the loop.
C) The marble will go through the loop and stop at the bottom of the loop.
D) The marble will start through the loop and roll back to the bottom of the loop.

6) How will the marble roll through this runway?

A) The marble will roll to the end of the runway.
B) The marble will stop at the top of the loop.
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7) Jen is trying to balance a flat cardboard shape on her finger. What can she do to balance the shape?

   A) add a counterweight to the bottom of the shape
   B) ask a friend to hold the shape
   C) hold the shape with both hands
   D) add weights to the top of the shape

8) Look at the ramp. Which roller went down the ramp in the path shown?

   A)  
   B)  
   C)
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9) Look at the ramp. Which roller went down the ramp in the path shown?

A)

B)

C)

9) What motion does an axle system use on a ramp?

A) rolling
B) spinning
C) balancing
D) twirling
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11) _________________ can be a scientist.

   A) Everyone  
   B) Only men  
   C) Only women  
   D) No one  

12) Which of the choices below does NOT show balance?

   A) A high-wire walker performing on the wire at the circus  
   B) A woman carrying a jug of water on her head  
   C) Two children playing on a see-saw (teeter-totter)  
   D) A boy knocking over a tower of blocks  

13) You use many skills that a scientist uses. A scientist uses writing, drawing,  
    and math when working. Another skill used by both of you would be  
    ________________.

   A) skipping on the playground  
   B) looking closely at things  
   C) singing songs  
   D) running in a race  

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14) What are these acrobats doing?

A) balancing  
B) pushing  
C) rolling  
D) pulling
15) Dan is running with a pinwheel in his hands. The pinwheel starts to spin. Why?

A) Water is pulling the pinwheel.
B) The pinwheel is rolling.
C) The air is pushing the pinwheel.
D) He is balancing the pinwheel.

16) What should you always include when making an entry in your science notebook?

A) drawing
B) writing
C) the date
D) all of the above
17) Look at the notebook entry.

This is a top.  
It can spin fast.

Which of these entries would a scientist add to this page?

A) I used force to start it spinning.  
B) It is pretty when it spins.  
C) I like my top.  
D) My top is the best.

18) A top needs both balance and ________________________ to spin.

A) weight  
B) wind  
C) light  
D) force
19) How are zoomers and tops alike?

A) They both spin.
B) They both roll.
C) They both balance.
D) They both make noises.

20) What makes a twirler spin?

A) the wings
B) the wind
C) the paper clip
D) air resistance

21) Matt had a shape balanced on his finger. He gave it a little push, and the shape went back and forth and then stopped. The shape was still balanced on his finger. This means that the shape was _________________.

A) stable
B) rolling
C) spinning
D) pulling