Name: _____

H.R. MACMILLAN SPACE CENTRE

Measuring Wind Direction
My Observations

Day	Time	Nephoscope	Weather Vane
e.g. Monday	*10:00 am*	*NW*	*NW*

My thoughts about the experiment…

1. Does the wind always blow in the same direction? _____
2. Does the wind direction change during the day? _____
3. Is there one direction that is more popular than others? _____
4. Name one advantage and one disadvantage of each instrument in the table below.

Instrument	Advantage	Disadvantage
Nephoscope		
Weather Vane		

5. Which instrument do I prefer? _____ Why? _____

   _____
6. Did I get the same results as my classmates? _____ Why? _____

   _____
7. If I could change something about my instrument to make it better, what would it be? _____

   _____

Measuring Wind Direction
Teacher's Notes

- Use a compass with the students to determine the placement of the instruments. If possible, put some weather vanes closer to the building than others (see disadvantages for discussion).
- Encourage the students to take measurements at different times of the day. Perhaps one half of the students takes measurements before classes start and after classes end, and the other takes measurements at each recess.

There are 13 rows in the students' version of the table below:

Day	Time	Nephoscope	Weather Vane
e.g. Monday	*10:00 am*	*NW*	*NW*

My thoughts about the experiment…

1. Does the wind always blow in the same direction? **No. Various elements will affect wind direction, such as the Sun, the mountains, the ocean, and weather fronts.**

2. Does the wind direction change during the day? **yes**

3. Is there one direction that is more popular than others? **If the measurements were to be taken over a long period of time, we would see a trend of more westerly winds. This is why it often takes less time to fly back East than to come out West – the airplane hitchhikes on the wind!**

4. Name one advantage and one disadvantage of each instrument in the table below.

	Advantage	Disadvantage
Nephoscope	**Is not affected by the wind's path around buildings.**	**Can't use it when there are no clouds nor when the clouds are not discernable.**
Weather Vane	**We can use it any time.**	**It may not work when there is a very weak wind.** **We may not get accurate readings when placed behind a building.** **These models may topple over.**

5. Which instrument do I prefer? **various** Why? **Look for reference to above table.**

6. Did I get the same results as my classmates? **various** Why? **You may turn this into another experiment – comparing proximity to building, comparing the construction of the individual vanes by having kids blow on them with the same force and direction, etc.**

7. If I could change something about my instrument to make it better, what would it be? **Various – allowing kids to modify their instruments is a fantastic way to apply the scientific method!**