5. direction, magnitude
6. Magnitude
7. True
8. Up or forward or possibly another description that I hadn't thought of but that makes sense for the diagram. The point I'm trying to make with the students here is that the description of the direction of a vector does not have to be complicated.
9. Diagram 'b' is not a vector because it does not have a magnitude. 'a' and 'c' both have a direction, indicated by the arrow itself, and a magnitude, indicated by the "miles per hour" notation. To be a vector, both direction and magnitude must be present.
10. down, 495 pounds.

WORD SEARCH

A	V	O	W	D	L	K	X	M	A	G	N	I	T	U	D	E	U	C	D
E	Y	H	G	D	I	N	B	Z	L	N	Q	H	M	F	N	Z	L	R	F
K	J	W	L	B	Z	R	F	V	D	B	M	D	I	D	N	W	D	L	G
D	H	H	A	V	Y	A	E	E	D	O	O	E	G	P	T	Z	M	P	P
Y	D	Y	R	J	F	B	C	C	O	Z	X	E	C	K	H	F	R	P	R
L	B	X	I	P	G	M	L	T	T	S	E	T	I	Q	J	A	Y	W	Y
K	E	H	K	N	I	T	Q	O	E	I	Q	T	D	M	E	U	P	U	J
Y	K	O	V	J	Y	E	J	R	Q	M	O	M	M	E	J	C	T	Z	P
H	V	D	N	P	K	T	R	B	Z	W	X	N	W	V	I	X	S	E	T
T	O	J	X	A	J	M	H	R	K	F	H	U	P	D	C	A	B	L	N
Z	F	W	H	I	R	C	A	P	O	F	E	J	N	O	B	R	A	D	A
L	J	N	I	X	A	E	Q	A	F	P	H	D	G	X	I	P	I	M	B
J	P	S	G	V	B	Z	C	F	B	D	F	R	P	T	I	W	V	N	X
V	U	F	D	K	T	O	Z	Z	X	F	M	B	L	G	R	Q	H	F	P
A	R	R	O	W	I	B	O	E	C	Z	O	E	V	L	J	X	H	W	H
L	C	F	H	U	F	B	X	R	W	Q	S	R	Z	M	I	S	K	E	H
L	H	L	I	G	P	S	L	L	C	Z	H	F	C	A	J	G	S	B	S
I	F	L	S	F	V	B	D	D	T	C	Q	U	E	E	M	R	Y	G	C
R	K	B	M	H	S	W	Q	V	J	N	Y	M	F	H	A	H	W	V	Q
O	O	D	L	A	S	M	B	V	D	A	Y	F	R	R	W	K	T	A	K

CLASS 47 Physics: Vectors, Part 2

1. c and e are correctly labeled
2. a, d and f show magnitudes but are missing directions and b shows a direction but is missing a magnitude.

CLASS 48 Physics: Vectors, Part 3

1. magnitude, size/length of the arrow
2. Crane 'b' has the heaviest load because the vector for the weight it's carrying is much larger than the vector for the load crane 'a' is carrying. A larger/longer vector means a larger/faster/stronger/heavier (etc.) force.
3. d. The vectors are the same size, which means that the magnitude of the motion is exactly the same. Neither one is moving faster than the other.
4. c
5. c
6. c
7. a
8. Toward

CROSSWORD

Across
3. Magnitude
4. Less
5. Vector

Down
1. Direction
2. Size
3. More

CLASS 49 Physics: Forces

1. False
2. a, b, c, d, e
3. motionless, force, motion
4. c, e
5. tension
6. buoyancy
7. The force is called lift and it's stronger on the plane in 'b'.