**Motion and Design Vocabulary (2012)**

Directions: For each vocabulary word, **draw a picture** to illustrate the word. Then use the word in a **meaningful sentence**.

1) Speed: distance traveled divided by the amount of time that is needed to travel that distance.

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2) Velocity: measure of speed in a particular direction

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3) Force: a push or pull that has a size and direction

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4) Inertia: measure an object’s tendency to resist changing its motion and depends on the amount of mass an object has

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5) Balanced forces: forces that cancel each other out because they are equal and acting in opposite directions

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6) Friction: force that resists motion between two touching surfaces

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7) Gravity: pull that all objects with mass exert on other matter

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8) Direction: a line of motion; relative position or location of a point without reference to its distance

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9) Position: the place where a thing is set in relation to other objects

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10) Motion: an object’s changes in position relative to a reference point over a period of time.

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11) Distance: the length of space between two objects or points in space

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12) Prototype: an original model or design

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13) Technological design: the process of designing and building products and systems to meet human needs

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14) Recursive testing: retesting and revising a product; part of the technological design process

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15) Blueprint: a detailed plan or drawing that shows how something is designed

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16) Laws of motion: three laws, formulated by Sir Isaac Newton, that describe how objects move in relation to the forces acting on them

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17) Distance-time graph: a graph that shows the motion of an object by showing how far it traveled during a period of time

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