

## GIANCOLI READING ACTIVITY

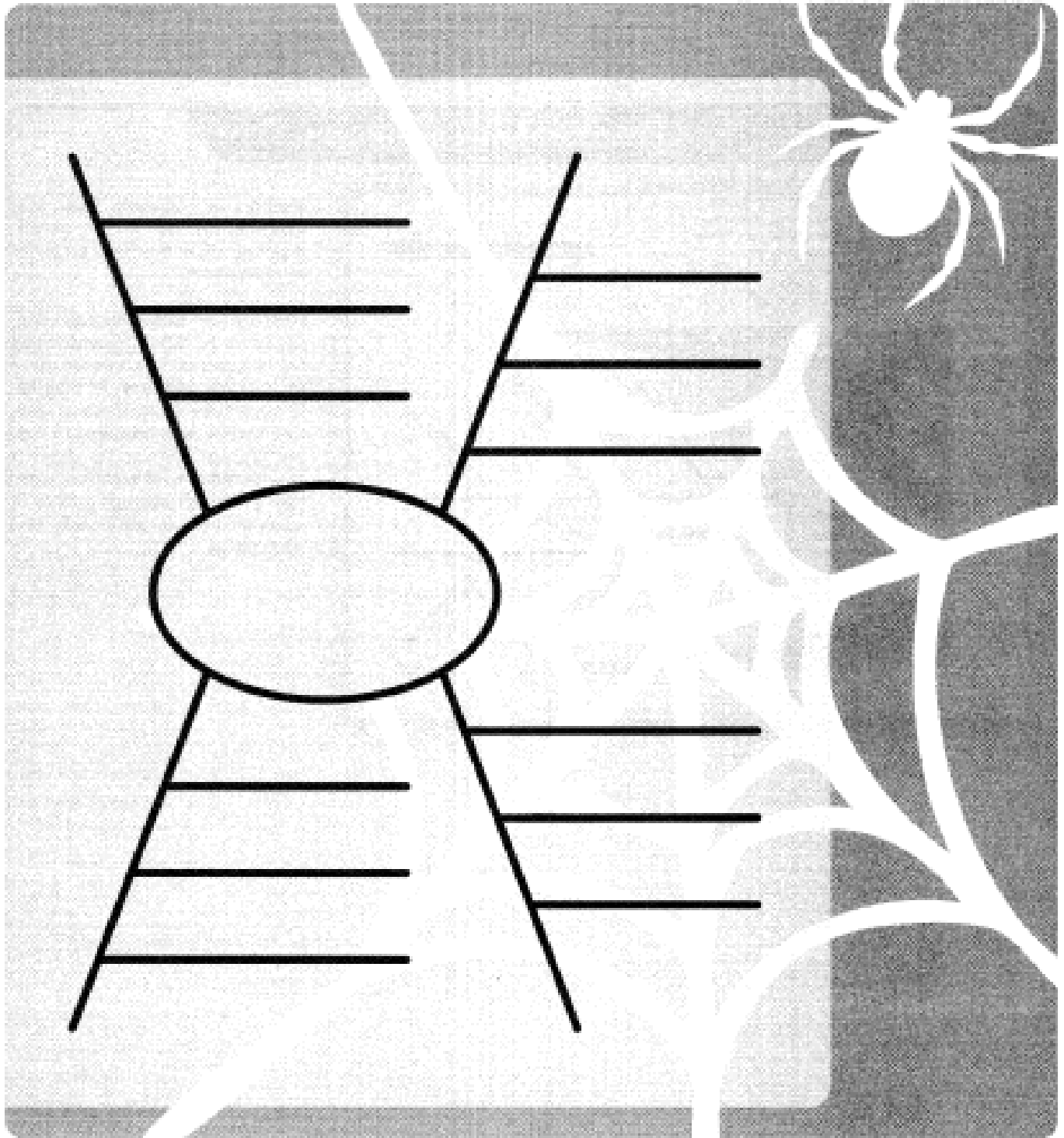
### Sections 2-1 to 2-3

1. Big Idea(s):
  - a. Big Idea 3: The interactions of an object with other objects can be described by forces.
2. Enduring Understanding(s):
  - a. Enduring Understanding 3.A: All forces share certain common characteristics when considered by observers in inertial reference frames.
3. Essential Knowledge(s):
  - a. Essential Knowledge 3.A.1: An observer in a particular reference frame can describe the motion of an object using such quantities as position, displacement, distance, velocity, speed, and acceleration.
    - i. Displacement, velocity, and acceleration are all vector quantities.
    - ii. Displacement is change in position. Velocity is the rate of change of position with time. Acceleration is the rate of change of velocity with time. Changes in each property are expressed by subtracting initial values from final values.
    - iii. A choice of reference frame determines the direction and the magnitude of each of these quantities.
4. Learning Objective(s)
  - a. Learning Objective (3.A.1.1): The student is able to express the motion of an object using narrative, mathematical, and graphical representations.
  - b. Learning Objective (3.A.1.2): The student is able to design an experimental investigation of the motion of an object.
  - c. Learning Objective (3.A.1.3): The student is able to analyze experimental data describing the motion of an object and is able to express the results of the analysis using narrative, mathematical, and graphical representations.
5. Read sections 2-1 to 2-3 in your textbook.
6. Complete 3 Spider Diagrams, one for each of the main concepts below:
  - a. Kinematics
  - b. Frame of Reference
  - c. Velocity
7. Answers may be typed or neatly printed. Drawings may be freehand, but try to make use of the ‘Shapes’ or ‘Insert Clipart’ functions of MS Word. If submitting electronically, use the filename format “LastnameFirstinitialPerXAssignment”.

Name \_\_\_\_\_

Date \_\_\_\_\_

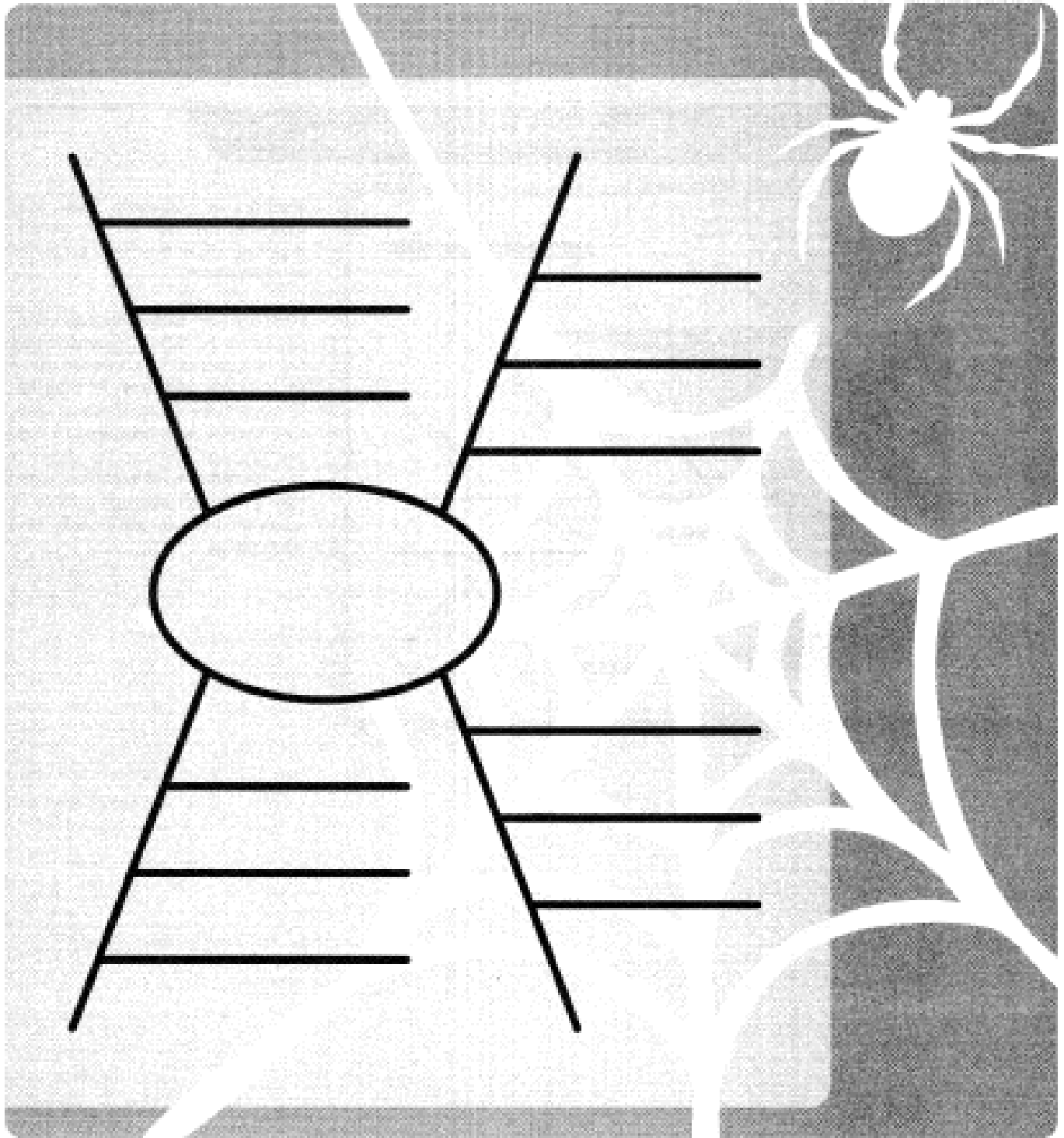
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