

Objects at rest remain at rest until forced to move. Objects in motion stay in motion until forced to stop. These statements describe ***inertia***. Force diagrams list forces acting on objects and show the direction in which the forces are acting. Some forces require contact; others act at a distance (have ***fields***).

You must create a product that demonstrates your understanding of these ideas. For the first two goals, you will make a pair of diagrams. For the second two, you will use various materials to show how the fields are alike and different. After I review your product, you will explain these ideas in an interview.

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**Assessment categories:**

1. Create a force diagram (mini poster) for an object at rest. [Relate it to inertia during your interview.]
2. Create a force diagram (mini poster) for an object that is **changing** speed. [Relate it to inertia during your interview.]
3. Use materials to demonstrate one way gravitational and electric or magnetic fields are **similar**.
4. Use materials to demonstrate one way gravitational and electric or magnetic fields are **different**.