



Following Scout Day: Architecture at Eastern State Penitentiary Historic Site, to finish the **Think Like an Engineer Journey**, Girl Scouts must complete three hands-on design challenges independently. Examples of appropriate hands-on challenges based on scout level can be found below. It is the responsibility of each Girl Scout to complete and report these activities to their troop leader.

These examples were developed and suggested by the Society of Women Engineers, East Central Iowa and accessed on their website in September 2023.

Daisy

1. Find out how engineers use design thinking to solve problems.
2. Do 3 hands-on design challenges: design and build a fairy house, a car powered by air, and a way to get across a canyon.
3. Plan a Take Action project that helps others.

Brownie

1. Find out how engineers use design thinking to solve problems.
2. Do 3 design thinking activities: design and build an assistive device, a water collection device, and a device that can launch a ball across a room.
3. Plan a Take Action project that helps others.

Junior

1. Find out how engineers use design thinking to solve problems.
2. Do 3 design thinking activities: design and build a paper structure that can support the weight of heavy books, an emergency shelter, and a prototype of a structure that can withstand an earthquake's shaking.
3. Plan a Take Action project that helps others.

Cadette

1. Find out how engineers use design thinking to solve problems.
2. Do 3 design thinking activities: design and build prototypes of a life vest for a dog, a model camp cabin inspired by nature, and a prosthetic leg for an elephant.
3. Plan a Take Action project that helps others.

Senior

1. Find out how engineers use design thinking to solve problems.
2. Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.
3. Plan a Take Action project that helps others.

Ambassador

1. Find out how engineers use design thinking to solve problems.
2. Do 3 design thinking activities: design and build prototypes of an animal enrichment product, a zip line course, and mobility equipment.
3. Plan a Take Action project that helps others.