Describe the ASET and RSET scenarios that you would conduct for elementary school (children approximately 5 to 11 years old)

1. **ASET scenarios (Fire Scenario)**

* **Design Fire Scenario**

The educational structure features four levels in total, a typical fire alarm system, and sprinklers. The building features a total of three exits, including one with a delayed exit door, allowing means of egress. The structure and exterior of the building are made of fire-resistant materials.

There is a small library in the school and some storage with piles of documents and paper there. Due to the age and amount of students, uncontrolled open fires in elementary schools take longer to detect and put out since they are harder to spot in the early stages. Additionally, it can be challenging to spot fires due to the abundance of warehouses and vacant classrooms at elementary schools located distant from the area of concern. If a fire starts in one of these locations, it may spread rapidly, giving you less time to react and more time to flee.

When all the students and staff escape to the playground and conduct roll call confirmation. The RSET is determined. For this scenario, the RSET could be 15 minutes.

1. **RSET scenarios (Evacuation Scenario)**

* **Occupant Characteristics**

Children: Most children between 5 to 11 are not well-trained and cannot escape in a trained way. So the RSET time might be much larger than for adults. By the way, human behaviors under fire are much more unpredictable for children.

They also have less life experience than adults, which makes it harder for them to run, and when a fire starts, they could panic and be helpless. These factors considerably increase the length of evacuation periods. As a result, educators will be crucial. They should direct the pupils to leave since, as adults, they have the appropriate judgment. Schools should also pay attention to fire drills, hold them frequently, and educate children about the dangers of fire and how to evacuate.

Emergency response personnel should be in the hotel and guide people to evacuate.

Describe the ASET and RSET scenarios that you would conduct for a Highrise apartment building in a major city

1. **ASET scenarios (Fire Scenario)**

**Design Fire Scenario**

In high-rise hotels, we must take into account how an exterior fire may affect the amount of time that is safe to escape. The means of egress on the third level of the building, including the first-floor exit, may be entirely blocked by the flame if the surrounding trees catch fire and their height is particularly high. Only a small number of exits are now accessible for occupants to use in order to leave the building safely, but this will change over time.

The Highrise apartment building is a type of building that falls under the occupancy-specific typical fire. We must take into account the hotel's contents and furnishings. Will someone smoking in bed cause the flame to spread quickly on the bed's surface? And will the fire spread quickly if someone throws cigarette butts in the trash can? Therefore, to ensure the available safe escape time, we need take into account the hotel's contents and furnishings and employ the proper fire prevention system.

1. **RSET scenarios (Evacuation Scenario)**

**Occupant Characteristics**

Elderly: For the elderly, try using the hotel door handle's bar rather than its knob. Avoid having the inability to open the door affects the necessary safe escape time. The elderly move more slowly and have less strong decision-making skills than the young. cause them to need more time to get away safely.

Children: Children don't have the same level of movement as adults do. Additionally, they have very poor decision-making skills and are dependent on their parents for care. When a fire occurs, parents will take extra time to let their kids leave first, lengthening the time needed for a safe escape.

Disabled: People with disabilities typically use wheelchairs and have very limited mobility. Therefore, the hotel occupancy must provide them with a means of evacuating in time, such as an elevator. Additionally, they must be able to access 60% of the exit.

It's possible that they are monitoring how long it takes for everyone to leave a hotel that is completely full. It could be better to place a slower employee in the most isolated location on the fifth floor and time how long it takes them to leave. This might be beneficial.