

## **HFA design principles:**

### **Signifiers:**

- Touch animation will be used around ui elements as a signifier when the user should interact with a ui element.
- Text labels on icons to clarify what certain affordances do(e.g, hide and hint texts on buttons at the bottom of the escape planning,phone, and quiz pages).
- Telephone icon to clue the user that this will initialize the calling function
- Back arrow for user to go back to the previous screen

### **Affordances:**

#### *Buttons:*

- round buttons use to perceive the affordance of clickability

#### *Graphic affordances:*

- Popup notifications will be displayed in response to user actions(right or wrong).
- Speech bubble next to the dog mascot to help provide subtle clues on how users can interact with the interface.
- Finger pointing at objects signifying that the user should click/interact with that object

### **Metaphor:**

- Speaker icon for audio on/off
- Telephone icon to call/hang-up
- Rotating incomplete circle to represent loading

### **Constraints:**

- Cannot move on to the next screen without completing the activity on the current screen

- Have to dial 9-1-1 in the correct sequence to call operator
- Cannot call any other number
- Only the operator can hang up
- Logical constraint on the natural mappings for button presses on the keypad. Each button clicked/tapped logically corresponds to dialing the number on the button
- Semantic constraint of a kid-first design. The kids should be comfortable interacting with the application without being overwhelmed by the overall experience. The content should be understandable given their cognitive skills(e.g., attention span, critical thinking)
- Cultural constraint of a more traditional north american approach to fire safety. Fire safety might not be the same for the kids if they grew up in another country and were brought here(e.g., second generation immigrants)

#### **Proximity:**

- The keys on the numpad have strong proximity to each other so the user understand they are of their own function

#### **Symmetry & Order:**

- A simple triangle on top of a square are easily identifiable as a shape of a simple house
- An rectangle with smaller rectangle inside can be identified as an apartment building