Radioactive Tag (Tracer Tag)

Concept

How radiotracers travel through the body

How It Works

- One student = “radiotracer”
- Tagged students raise their hand = radioactive signal
- Play a few rounds

Alternative version: Give one student a flashlight, turn off the lights.
They have 10 seconds to shine the light on several students → those students raise their hand.

Discussion Prompt

How do tracers move through the body? How do technologists detect them?

Learning Point

Nuclear medicine helps us trace movement inside the body (blood flow, metabolism, etc.).

Half-Life Candy Game

Concept

Understanding radioactive decay

Materials Needed

- M&Ms, Skittles, coins, or dice
- Container or cup
- Graph or worksheet (optional)

How It Works

- Each candy = radioactive atom
- Shake the container
- Remove candies that land on a designated side (ex: “M” facing up)
- Count how many remain each round
- Graph the decay pattern

Learning Point

Half-life shows how radioactivity decreases over time in predictable steps.

“Cancer Seek-and-Destroy” Beanbag Game

Concept

How targeted radiotherapy works

Setup

- Poster with “cells”
- Healthy cells
- Tumor cells
- Beanbags = “radiation”

How It Works

- Students aim beanbags only at tumor cells
- Avoid healthy cells → just like targeted therapy

Learning Point

Theranostics targets cancer cells while protecting healthy tissue.

“Find the Source” Scavenger Hunt

Concept

How technologists locate radioactive sources

How It Works

- Hide “hot spots” (stickers, QR codes, toy beacons)
- Students use simple “detectors” (phone compass, beeping toy, or clues)
- Students mark each hotspot on a room map

Learning Point

Technologists use detectors to find radiation for scans and treatments.