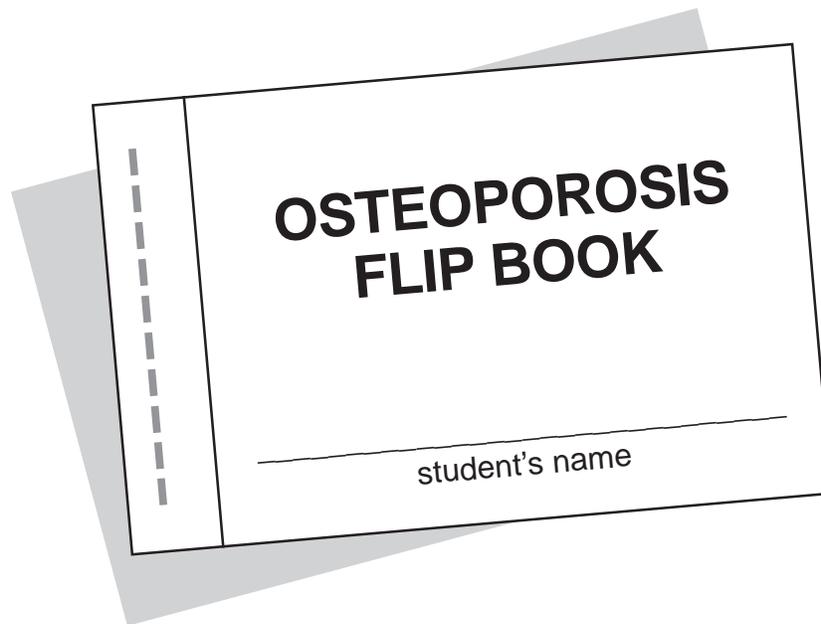


## ACTIVITY 5A: FLIPBOOK

### OSTEOPOROSIS FLIPBOOK

Read the information about bone density and osteoporosis. The frames on the following page illustrate the progression of osteoporosis, but they are not in order. Read through the descriptions provided on the left. Cut out the frames and lay them out in order from most dense to least dense bone tissue, then number 1–10. Staple the pages together, hold the left edge of the set, then “flip” the right edge to *see* osteoporosis weaken bone.



**BACKGROUND:** Healthy bone is made up of compact (cortical) and spongy (trabecular) bone. Both make up the bone mass contained in your skeleton. As we age, bone mass decreases. However, osteoporosis is a disease in which bone mass erodes rapidly thus increasing the chance of fracture. It can strike anyone, but certain risk factors (family history, gender, exercise, nutrition) increase that likelihood. The wrist, hip, and spine are the most common sites affected by osteoporosis. The severity of the bone mass loss can be measured with a bone densitometer.

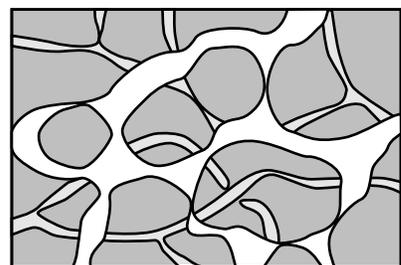
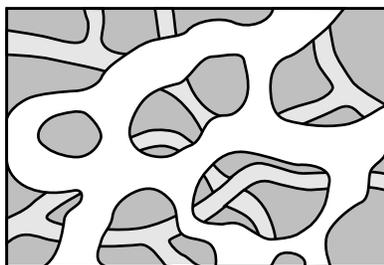
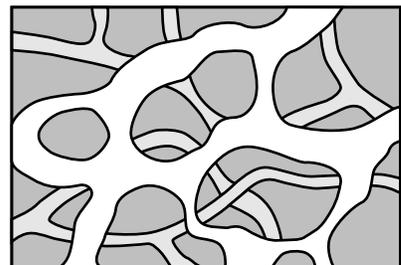
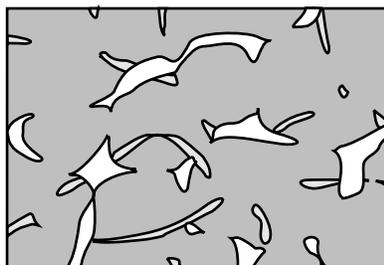
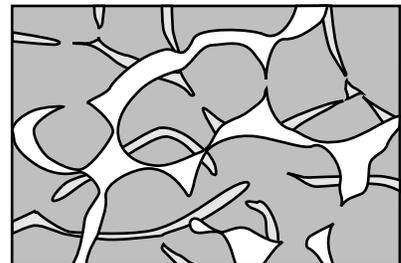
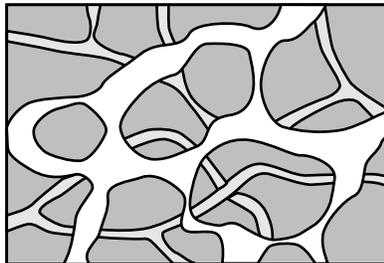
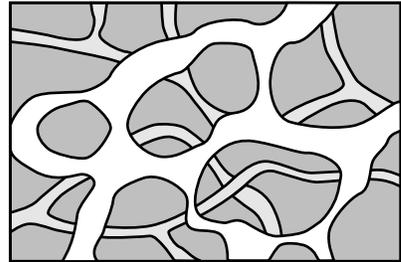
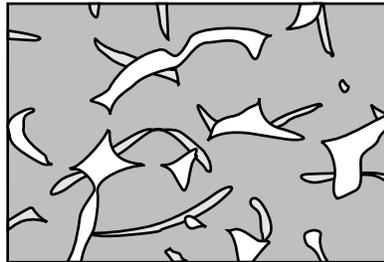
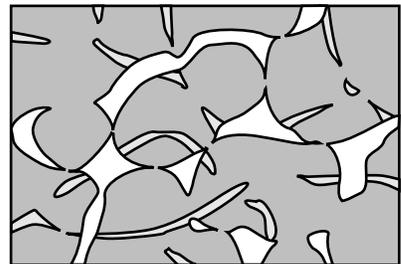
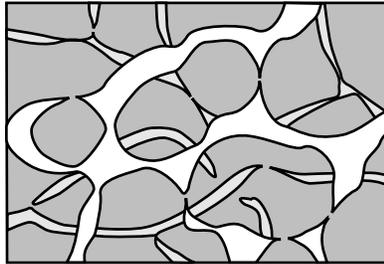
**FRAME 1** illustrates a section of normal trabecular bone tissue such as is found in the hip, the vertebrae, or the ends of long bones.

**FRAMES 2-4** show the beginning stages of osteoporosis or mild osteoporosis. There is a silent loss, or thinning, of bone mass and usually has no symptoms.

**FRAMES 5-7** picture moderate osteoporosis in which connectivity (“bridging”) decreases among the bone tissues as its mass continues to decrease. The victim’s posture becomes somewhat slumped. The risk of fracture exists.

**IN FRAMES 8-9**, more loss of bone mass is evident. The spine continues to curve as this severe osteoporosis continues. Connectivity continues to decrease. Posture visibly changes. Fractures can occur as one pursues “normal” daily activities.

**FRAME 10** shows severe osteoporosis with multiple “microarchitectural” fractures of the trabecular structure. There is a total loss of connectivity—no “bridges.” This leads to extremely abnormal posture and back pain. Radial, femoral, and vertebral fractures occur with minimal activity. At least half of those who suffer these fractures never regain their normal function.



## OSTEOPOROSIS FLIP BOOK

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student's name