First off, you can treat the pelvis as an equation involving three shapes:

1 triangle + 1 circle + 1 oval = 1 os coxae

Each os coxae is divided into three separate bones, marked approximately by the dashed black line in the figure:

1. Ilium
2. Ischium
3. Pubis

The bones of the pelvis are composed of two ossa coxae (hip bones), the sacrum, and the coccyx (tailbone). In the diagram below, the osa coxae are red, the sacrum is yellow, and the coccyx is blue.

These three bones begin as separate centers of ossification, and fuse together as individuals age. The acetabulum completes fusion during adolescence.
The inferior half of the pelvis (ischium, pubis and acetabulum) looks like a mouse lemur in anterio-lateral view. When orienting, remember that the lemur’s nose always points in medially and inferior direction when looking at the pelvis from the front.

In contrast, the top half of the pelvis looks more like the creature from *Alien*. Understandably, this beast does not get along with the mouse lemur, and so faces posteriorly.
Think of the *acetabulum* as PAC-MAN chomping inwards, medially and inferiorly, towards the middle of the body.

The smooth, raised ridge of bone inside the acetabulum is the *lunate surface*, the area where the femoral head articulates with the hip. It is shaped like a croissant.

The narrow arch of the *Greater Sciatic Notch* (GSN) is unmistakable – its steep, smooth curvature resembles nothing else in the human skeleton.

The *Posterior Superior Iliac Spine* (PSIS) and *Posterior Inferior Iliac Spine* (PIIS) make up the posterior end of the iliac crest. If you think of the lateral ilium as a pachycephalosaurus head, the PSIS is its snout, and the PIIS is its mouth.

Left os coxae, anterio-lateral view
The Anterior Superior Iliac Spine (ASIS) and Anterior Inferior Iliac Spine (AIIS) are located on the anterior portion of the ilium. These represent muscle attachment sites for muscles and ligaments. They resemble a footstool with softly curved steps. When examining the individual steps, remember that the ASIS is the higher one and the AIIS is the lower one.

The auricular surface is a rugose area on the posterior and medial surface of the ilium. It is shaped like an exaggerated kidney bean, and marks the area where the os coxae articulates with the sacrum. The most convex portion of the bean is medial.

The pubic symphyseal face is a roughened, narrow oval that marks the region where the two ossa coxae almost meet. The face is just the right size and shape for leaving a thumbprint, were you to touch your thumb to its surface.
5. IDENTIFYING FEATURES – THE ISCHIAL TUBEROSITY, ISCHIAL SPINE, AND ILIAC CREST

The iliac crest snakes along the superior most portion of the ilium. It is a separate center of ossification, and fuses completely to the ilium by 20-23 years of age. If you picture the ilium as an opened hand fan, the iliac crest is its superior border.

The ischial spine is the most angular portion of the pelvis. Its sharp edges sit at nearly right angles to one another. Go back to Slide 4 to observe it in medial view.

The ischial tuberosity is one of the densest portions of the pelvis. Located inferior and posterior to the acetabulum, it has the surface texture of hardened bread dough, and will sit nicely in the palm of your hand if you’re grasping the os coxae by the ischium.
6. ORIENTING THE OS COXAE IN THREE EASY STEPS

**STEP 1:** Identify the superior and inferior halves of the pelvis. Make sure the ilium is pointing up.

**STEP 2:** Identify the roughened surface of the ischial tuberosity. Grip the os coxae by the tuberosity, so that the ilium is up and the head of the alien/pachycephalosaurus is facing towards you.

**STEP 3:** Double check: Is the acetabulum facing laterally? Is the bean-shaped auricular surface on the medial and posterior portion of the bone? Is the pubic symphyseal face medial?

Left os coxae, anterio-lateral view

Left os coxa, posterio-medial view

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7. REVIEW OF ORIENTATION

I always grip a complete os coxae so that the thick, roughened ischial tuberosity is in my hand.

WARNING: Always be careful when handling osa coxae as the ischiopubic rami, iliopubic rami, and iliac blades can be very fragile. I suggest using a supporting hand and holding the bone over a padded surface.