

Written Pitch and Transposing Instruments

A rehearsal-ready lesson that makes concert pitch, written pitch, and instrument transposition finally click.

Find the Note

TEACHER PLAN + STUDENT WORKSHEET

At a glance

Grade band	Grouping	Prior knowledge	Materials
Grades 7–12	Ensemble sections, mixed teams	Intervals; note names	Concert-pitch and transposing instruments, scores, Find the Note

Driving question: Why can two musicians read different notes and still produce the same pitch?

Success criteria:

- Distinguish written pitch from concert pitch.
- Explain the practical reason transposing notation exists.
- State what concert pitch sounds when a B-flat, E-flat, or F instrument plays written C.
- Verify a transposition using sound, interval reasoning, and detector settings.

Launch: the “wrong” C (8 minutes)

Ask a flute or piano and a B-flat trumpet or clarinet to play their written C together. The pitches will not match. Ask:

- Did anyone finger the wrong note?
- What did each player read?
- What did the room hear?

Repeat with the B-flat player performing written D against concert C. Let students discover the match before naming the system.

Teach: two valid labels (15 minutes)

Written pitch is the note printed in a player's part. **Concert pitch** is the sounding pitch shared across the ensemble.

Instrument family	Written C sounds as	Sounding relationship
Concert pitch: flute, oboe, piano, strings	Concert C	Same

Instrument family	Written C sounds as	Sounding relationship
B-flat: trumpet, clarinet, tenor saxophone	Concert B-flat	Major second lower
E-flat: alto/baritone saxophone	Concert E-flat	Major sixth lower*
F: horn	Concert F	Perfect fifth lower

*Register depends on the specific instrument; the pitch class relationship remains E-flat.

Transposing notation allows related instruments to use familiar fingerings and written ranges. A clarinetist moving among members of the clarinet family can associate written C with a familiar fingering even though the concert pitch changes.

"In B-flat" means: when this instrument reads and plays C, the room hears B-flat.

Human transposition map (12 minutes)

Place students in mixed-instrument teams. Assign each person one role:

- Written-note reader
- Concert-pitch translator
- Interval checker
- Detector operator

Call a written C. Each team predicts the concert pitch for its assigned instrument family, then stands behind a large C, B-flat, E-flat, or F card. Teams explain the interval direction.

Detector laboratory: verify both labels (20 minutes)

- 1 Set the detector to concert pitch.
- 2 Have a transposing instrument play written C.
- 3 Record the detected concert pitch and frequency.
- 4 Change the detector to the correct instrument setting.
- 5 Repeat the same fingering.
- 6 Record the written note displayed.

Instrument	Note in part	Concert display	Instrument display	Frequency changed?
B-flat	C			
E-flat	C			
F	C			

Ask: "Which setting is useful to the conductor? Which is useful to the player?"

Rehearsal application (10 minutes)

Give a concert B-flat tuning pitch. Students determine the note each family should read:

- Concert-pitch instruments: B-flat
- B-flat instruments: C
- E-flat alto saxophone: G
- F horn: F

Verify with the detector in concert-pitch mode. Then reverse the problem: provide a written note and ask for its concert sound.

Differentiate

Support: Work only from written C and use interval arrows.

On level: Translate common rehearsal pitches in both directions.

Extend: Include octave displacement, tenor saxophone, piccolo, double bass, or score-reading excerpts; ask students to write a four-note concert melody for multiple instrument families.

Misconceptions to catch

- Transposing instruments are out of tune.
- Written pitch is fake and concert pitch is real. Both labels serve different users.
- All B-flat instruments sound in the same octave.
- Transposition is the same as changing clef.
- The direction used to convert written-to-concert is automatically the same when converting concert-to-written.

Printable student page

Vocabulary and reasoning

- 1 Define written pitch and concert pitch.
- 2 Complete: "An instrument in B-flat sounds _____ when it plays written C."
- 3 Why was transposing notation developed?
- 4 Which detector setting would a conductor use to compare the whole ensemble? Why?

Translate

Instrument	Given	Find	Answer
B-flat trumpet	Written C	Concert pitch	
F horn	Written C	Concert pitch	
Alto saxophone	Written C	Concert pitch	
B-flat clarinet	Concert B-flat	Written pitch	
Alto saxophone	Concert B-flat	Written pitch	

Exit ticket

Respond to: "My trumpet says C, but the detector says B-flat, so one of them is wrong."

Answer key and teacher look-fors

1. Written pitch is printed for the player; concert pitch names the sound.
2. concert B-flat.
3. It preserves familiar fingering-to-notation relationships across related instruments.
4. Concert pitch, because it gives one shared label for the sound.

Translation answers: B-flat, F, E-flat, C, G. Strong exit responses explain that both readings are correct under different labeling systems and that the frequency is unchanged.